

MARKET FORECAST

Internet and Intranet Market Analysis, Worldwide 1997-2002

Internet and Intranet Market Analysis, Worldwide 1997-2002

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Abstract

The Internet market is continuing to grow faster than any other major sector within information technology (IT). Online services, Java, Internet security, and Intranet development services and products will be deployed in nearly all user organizations by 2002, mostly to replace existing non-Internet equivalents.

Although annual growth rates will gradually fall as the market increases in size, INPUT forecasts considerable growth between 1997 and 2002:

- The worldwide market for all Internet and Intranet equipment, software, services, data communications, and in-house staff will increase from \$80 billion in 1997 to \$560 billion in 2002 (a CAGR of 47%)
- The worldwide market for Internet and Intranet software and services will increase from \$38 billion in 1997 to \$300 billion in 2002 (a CAGR of over 50%).

This report sizes and forecasts two Internet/Intranet markets:

1. Software and services—professional services, systems integration, outsourcing, processing services, network services, applications software products, systems software products, turnkey systems, and equipment services
2. Total Internet/Intranet market—equipment, data communications, software products, IT services, and in-house staff

Markets are split by region (five regions) and by country (33 countries).

Published by
INPUT
Cornwall House, 55-77 High Street
Slough, Berkshire, SL1 1DZ
United Kingdom

Internet & Intranet Technologies

***Internet & Intranet Market Analysis,
Worldwide 1997-2002***

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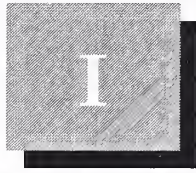
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Introduction

A

Objectives and Scope

This report sizes and forecasts the worldwide, regional, and country markets for Internet and Intranet software and services. The software and services market is segmented into nine delivery modes (see the Definitions section below for further details):

1. Professional Services
2. Systems Integration
3. Outsourcing
4. Processing Services
5. Network Services
6. Applications Software Products
7. Systems Software Products
8. Turnkey Systems
9. Equipment Services

In addition, it sizes and forecasts the market for total Internet/Intranet expenditure, segmented into five delivery modes (see the Definitions section below for further details):

1. Equipment
2. Data Communications

3. Software Products

4. IT Services

5. In-house Staff

B

Research Methodology

The market sizes and forecasts presented in this report are based on:

- INPUT's overall worldwide, regional, and country IT market forecasts
- Previous INPUT Internet market forecasts
- The results of hotline services provided by INPUT for its clients on Internet market sizing and forecasting

C

Definitions

1. Software and Services

INPUT defines nine delivery modes within IT software and services. These are detailed below, and examples of Internet- and Intranet-related categories are given within each mode.

1. Professional Services

- Web site design
- Intranet infrastructure implementation
- Small-scale integration of Intranet and legacy applications

2. Systems Integration

- Large implementation projects with a high level of customization.
- Intranet application development

- On-line service development
- Large-scale integration of Intranet and legacy applications

3. Outsourcing

- Outsourcing of Internet/Intranet IT function

4. Processing Services

- Internet commerce transaction handling
- High-volume user profiling services

5. Network Services

- Internet access services (excluding telecommunications costs such as leased line)
- Web site hosting
- Intranet and other application server hosting
- Internet commerce services
- Extranet/VPN services

6. Applications Software Products

- Internet-based ERP application software products
- Internet-based collaborative software products
- Internet-based office software products

7. Systems Software Products

- Internet and Intranet infrastructure software
- Web servers and clients
- Email servers and clients
- Messaging software
- Security software

- Object/middleware technology
- Internet/Intranet content and application development tools

8. Turnkey Systems

- Internet kiosk systems
- Non-configurable, dedicated Web servers

9. Equipment Services

- Internet infrastructure hardware maintenance
- Internet systems maintenance

2. Total Internet/Intranet Market

In addition, INPUT defines five delivery modes within the total Internet/Intranet market. These are detailed below, and examples of Internet- and Intranet-related categories are given within each mode.

1. Equipment

- Internet-related network equipment such as routers, switches, and modems
- Computer systems dedicated to Internet/Intranet use such as Web server hardware

2. Data Communications

- Expenditure on telco services used for Internet and Extranet access, such as leased lines and ISDN

3. Software Products

- Internet-related systems software products (detailed above)
- Internet-related application software products (detailed above)

4. IT Services

- The Internet software and services market excluding software products and hardware where it is included in a services contract such as a system integration project

5. *In-house Staff*

- Expenditure on in-house technical staff; excludes related facilities such as office costs, and expenditure on non technical staff

3. **Market Comparison**

It must be noted that there are important differences in the definitions of the “software and services market” and the “total Internet/Intranet market”:

- Within the “software and services” market, hardware is included where it is an integral part of a services contract such as a systems integration project. All software is counted
- Within the “total Internet/Intranet market”, the “IT services component” does not include this hardware. Only the services are measured. Software is not counted
- Within the “total Internet/Intranet market”, therefore, all hardware is counted in the “equipment” category. This includes hardware bought “off the shelf” and hardware provided as part of a services contract. All software is counted in the “Software products” category

To illustrate these differences:

- Worldwide expenditure in the “software and services” market in 1997 is \$38 billion
- Within the “total Internet/Intranet market”, worldwide expenditure on “IT services” in 1997 is \$20 billion
- The difference of \$18 billion is accounted for by:
 - System software products
 - Application software products
 - The hardware component of services contracts

D

Report Structure

- Chapter II provides an Executive Summary. It presents the top-level worldwide and regional market figures and discusses trends in key Internet/Intranet technologies
- Chapter III sizes and forecasts the total Internet/Intranet market: equipment, data communications, software products, IT services, and in-house staff, by region
- Chapter IV lists countries and regions in order of software and services market size and growth rates, shows Internet/Intranet expenditure as a proportion of total IT spending, and illustrates regional and country markets as proportions of world and regional markets respectively
- Chapter V forecasts the worldwide and regional Internet/Intranet software and services markets and shows a breakdown of the nine delivery modes included within software and services per region
- Chapter VI forecasts the overall Internet/Intranet software and services markets by country
- Chapter VII shows the breakdown of the Internet/Intranet software and services markets by country and by delivery mode.

E

Related Reports

- *Worldwide Internet Market, 1995-2000*
- *US Market Forecast Compendium, 1996-2001*
- *European Software and Services Market Forecast, 1997-2002*
- *U.S. Software and Services Market Forecast, 1997-2002*



Executive Summary

A

Total Worldwide Internet/Intranet Expenditure to Reach \$560 Billion by 2002

This report sizes and forecasts two markets:

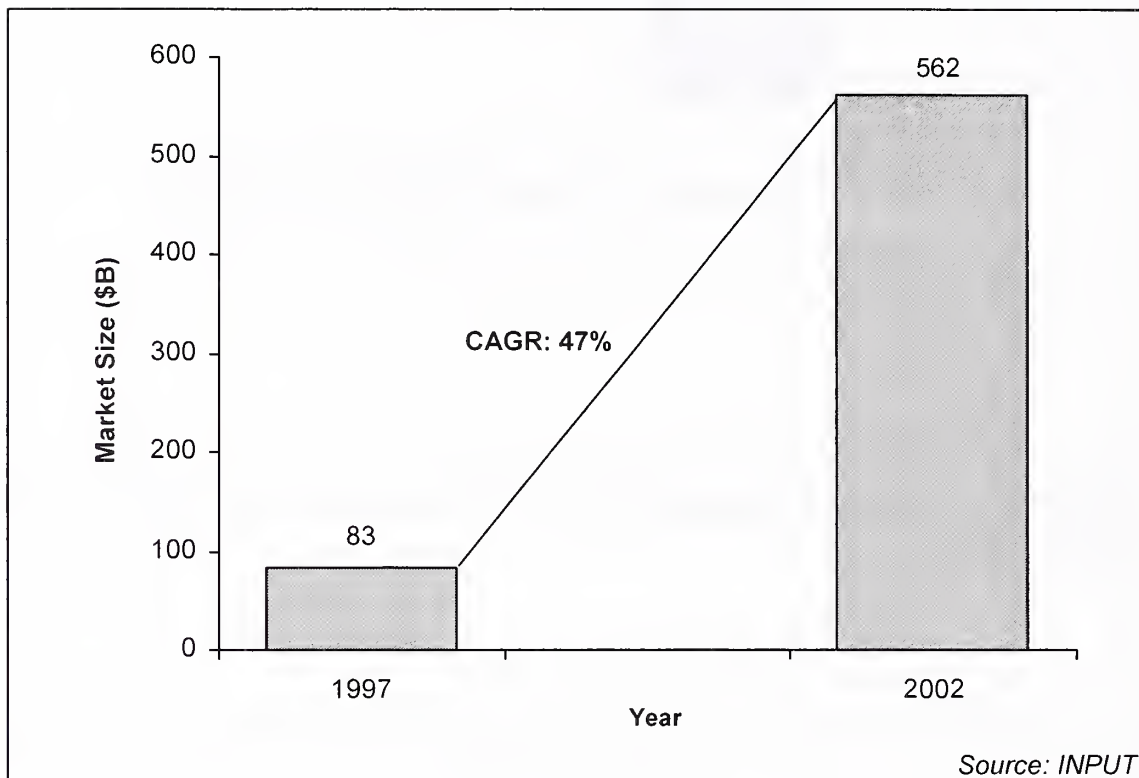
1. Total Internet- and Intranet-related IT spending, including all hardware, software, services data communications, and in-house staff costs
2. Internet- and Intranet-related software and services.

Total expenditure on Internet and Intranet products, services and in-house staff will increase by nearly 50% per year from 1997 to 2002 to reach \$562 billion (Exhibit II-1).

It is now five years since restrictions on commercial use of the Internet were lifted, and the World Wide Web was invented, yet the market for Internet and Intranet products and services is continuing to grow extremely rapidly. No other market has shown such consistently high growth rates over a long period.

The market can continue to grow at such rates due to the replacement, not additive nature of most of the Internet market. All areas of IT are affected in some way by the Internet and Intranets, and IT products and services will increasingly migrate to the Internet platform. The potential market for Internet/Intranet products and services is, therefore, the whole IT market itself, not just new business within the IT market.

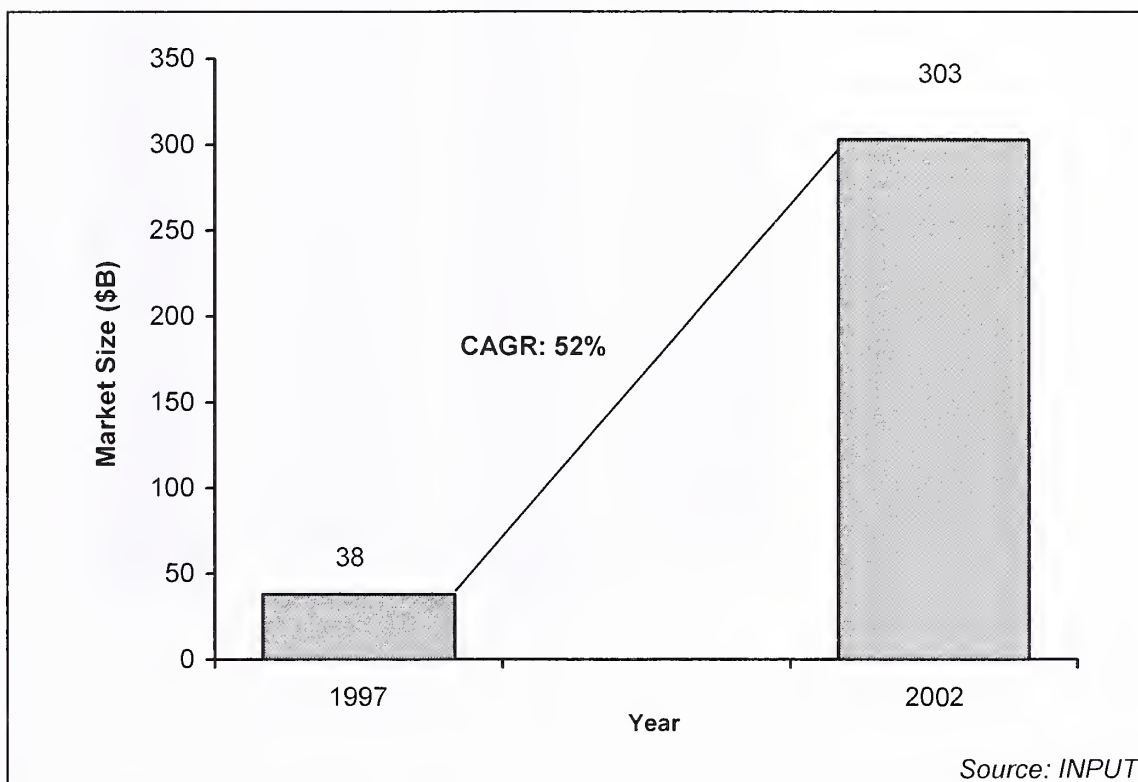
Exhibit II-1

Total Internet/Intranet Market, 1997-2002: Worldwide

The subset market of Internet- and Intranet-related software and services, with which this report is primarily concerned, will grow at a higher rate from 1997 to 2002, to reach \$300 billion by 2002 (Exhibit II-2).

Exhibit II-2

Internet/Intranet Software and Services Market, 1997-2002: Worldwide



B

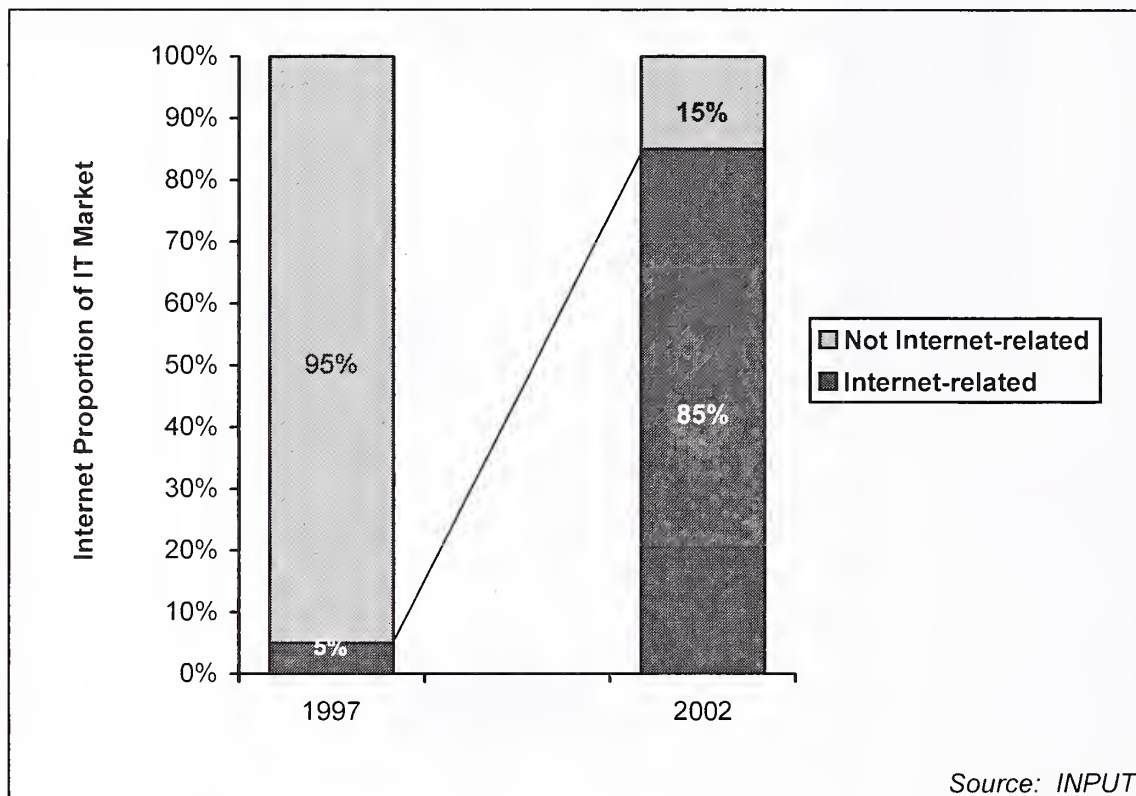
IT Software and Services With Internet Component Will Tend to 100%

The integration of Internet technology into IT products and services will tend towards 100%. I.e., INPUT expects almost no IT product to remain untouched by the Internet by 2002, from word processors with HTML formatting and Internet document publishing (file transfer) functionality, through all collaborative working and messaging applications, to high-end enterprise applications with Internet-based information retrieval and Extranet capabilities.

Exhibit II-3 shows the proportions of software and services that relate in some way to the Internet or Intranets in 1997 and 2002 in the US. In this Exhibit, all products and services are counted that have any Internet component, however small. For example, Microsoft Word 97 is counted here, as it contains some Internet functionality.

Exhibit II-3

Internet-Related IT Software Products and Service Offerings, US



The 15% of products in use in 2002 which will not be related in any way to the Internet comprise:

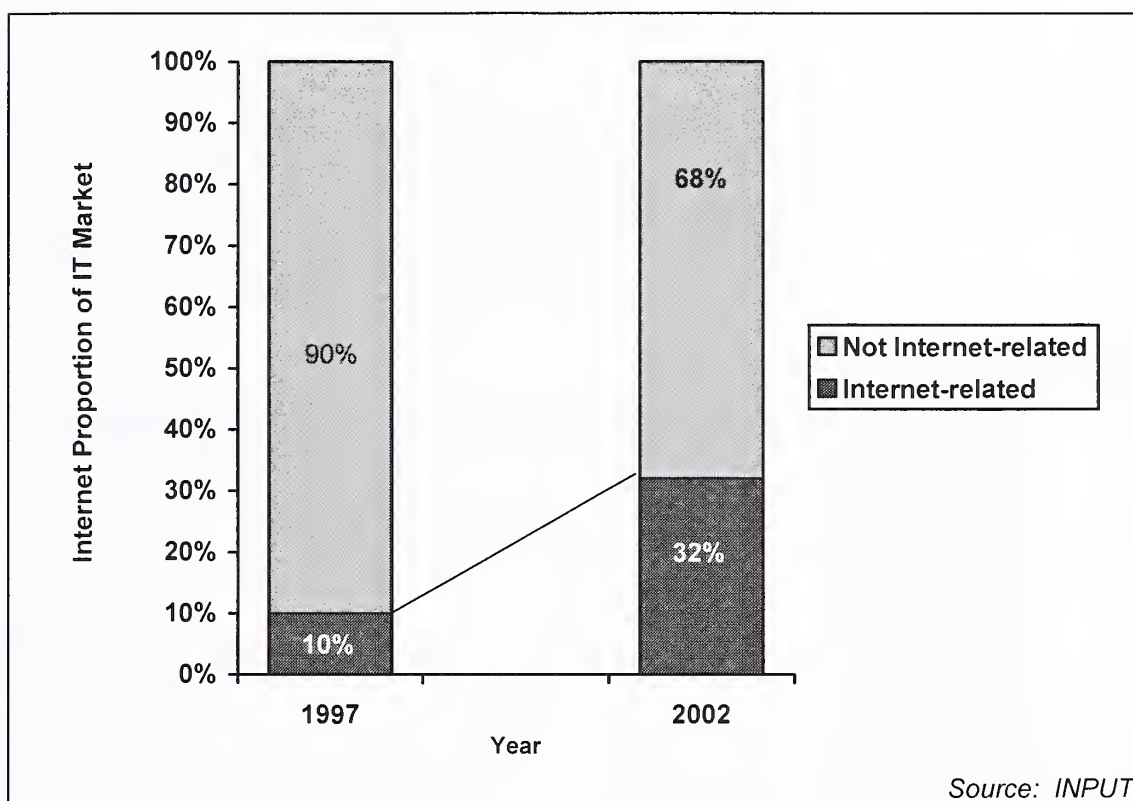
- The small minority of products and services that have no need of Internet connectivity or functionality
- Versions of products in use which predate their Internet-enabled releases.

While 85% of software and services will include an Internet component in 2002, the Internet market is not simply 85% of the overall market. The Internet component in most products and services will be a subset of the overall product or service, and therefore a subset of expenditure.

Exhibit II-4 shows the Internet-specific proportions of the US software and services market in 1997 and 2002. To illustrate, only the Internet-specific component of Microsoft Word 97 is counted in this Exhibit.

Exhibit II-4

Internet-Related Proportions of IT Software and Services Market, US

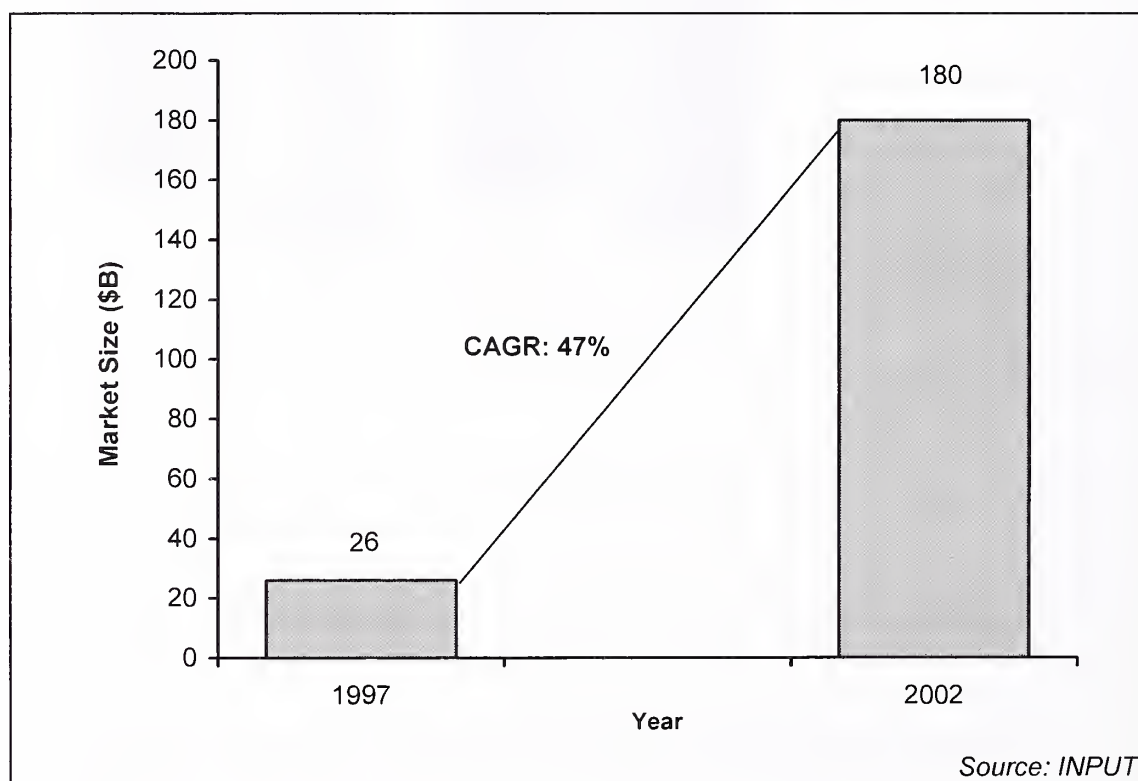


C**Regional Markets****1. North America**

The North American market is almost synonymous with the US market although, as an early adopter, Canada will remain at the forefront of Internet developments.

As the most mature region in the Internet/Intranet market, North America shows slightly lower than average growth rates between 1997 and 2002, although growth is clearly still extremely high at 47% per year. Between 1997 and 1998, for example, the North American Internet software and services market will increase by 75%.

Exhibit II-5

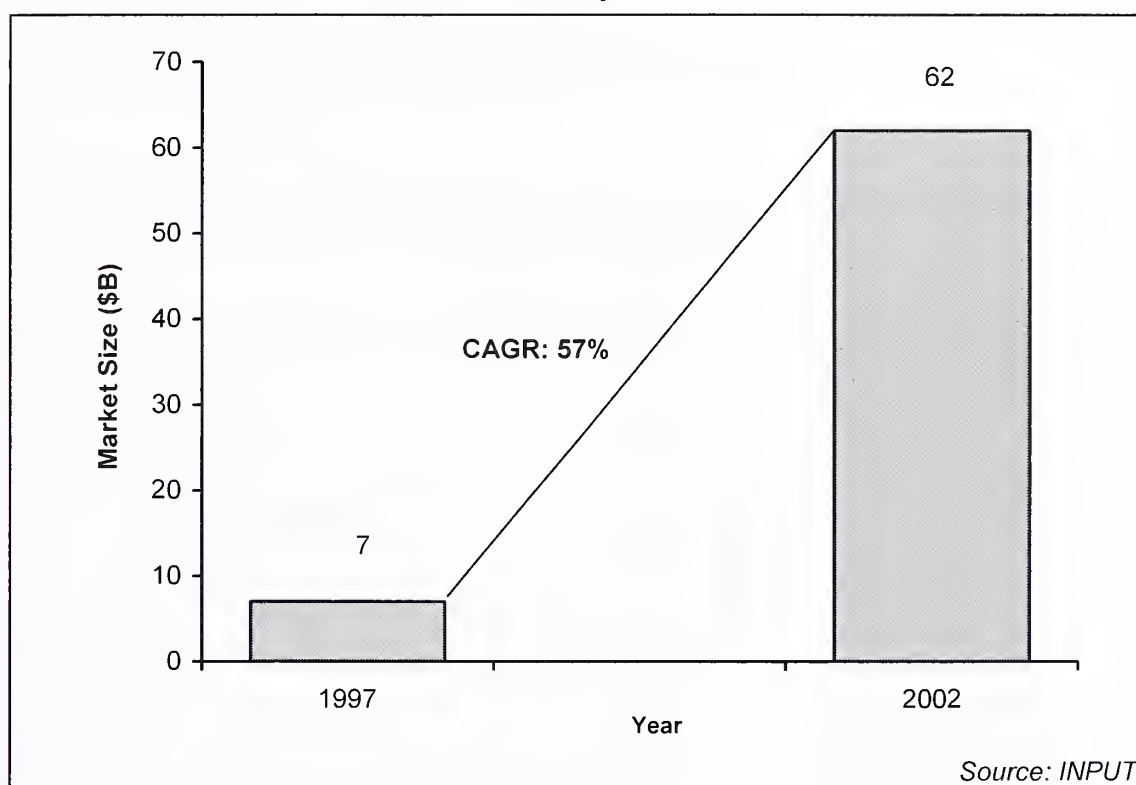
Internet/Intranet Software and Services Market, 1997-2002: North America

2. Europe

The UK, France and Germany, as in the overall IT software and services market, will account for over half of European Internet/Intranet expenditure. Internet pioneers such as Sweden and Finland will remain advanced compared with most countries, but decreasingly so as less Internet-developed countries catch up in terms of Internet infrastructure and usage, and adoption of technologies such as Intranets and NCs.

Exhibit II-6

Internet/Intranet Software and Services Market, 1997-2002: Europe



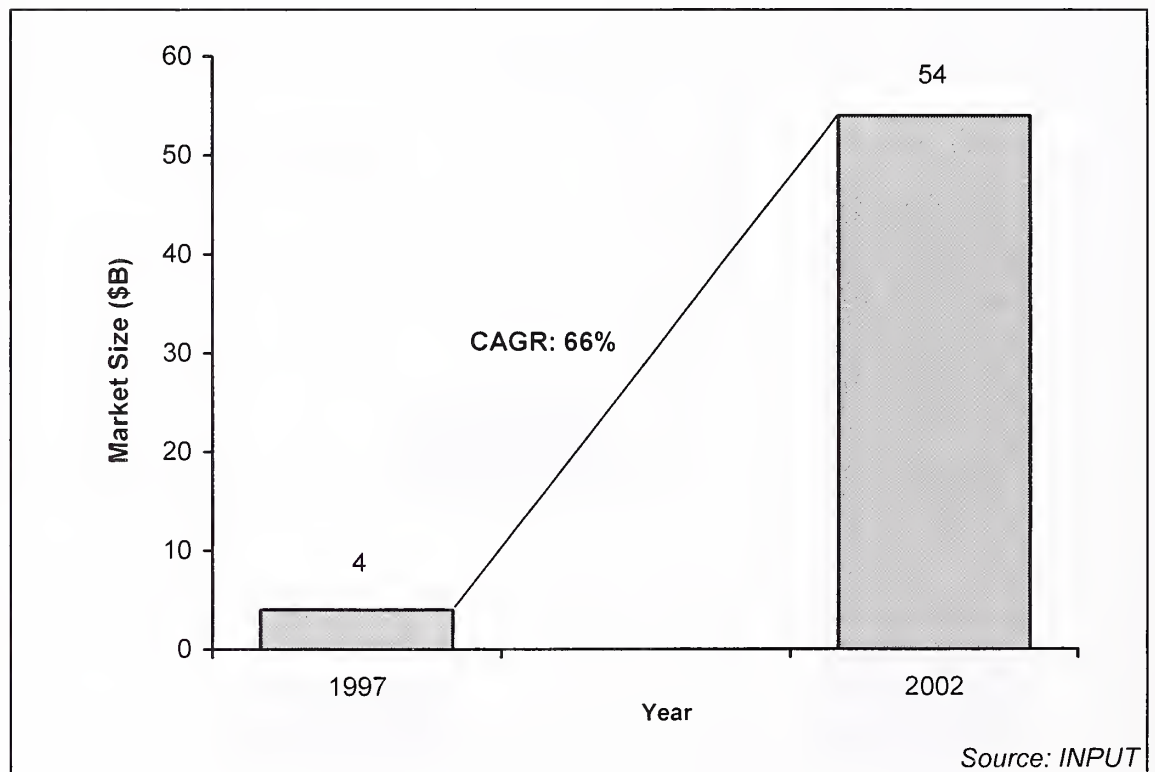
3. Asia-Pacific

Most of the fastest-growing countries in the Internet market are in Asia-Pacific: China, India, South Korea and Singapore will all grow at over 80% CAGR between 1997 and 2002. The region's economic future, however, is less certain than is North America's or Europe's, and the Asia-Pacific market will remain volatile.

In 1997, Japan accounted for 90% of Internet-related software and services spending in Asia-Pacific; this will decrease to 80% by 2002 due to extremely high economic growth within other countries in the region.

Exhibit II-7

Internet/Intranet Software and Services Market, 1997-2002: Asia-Pacific

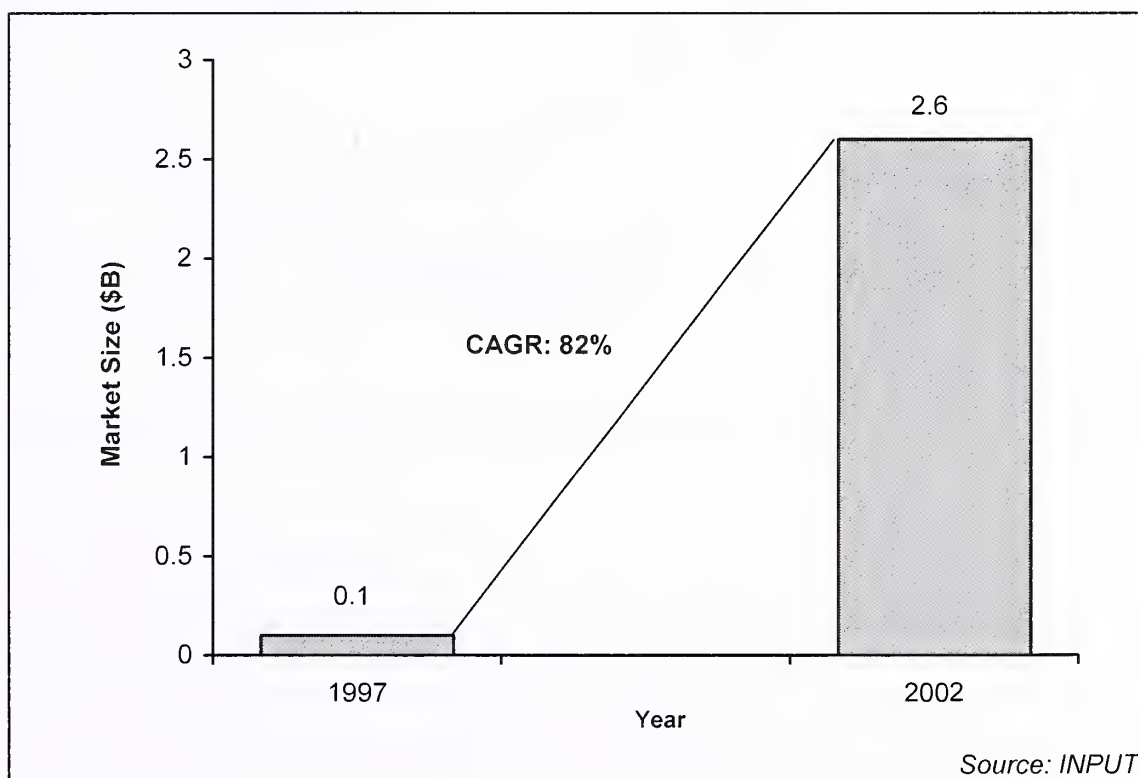


4. Middle East & Africa

Much of Africa will remain relatively untouched by the Internet phenomenon. Network infrastructure (including telephone landlines) is sparse and costly to install. Wireless communications such as satellite Internet connectivity will be important and will form a significant proportion of network infrastructure. This will be funded both by governments seeking to position their economies in the distributed electronic business world and by foreign companies looking to set up operations in Africa and connect them to other locations. The South African market will develop along similar lines to the Northern Hemisphere markets. Existing infrastructure is considerably more advanced than in the rest of Africa, and foreign investment is increasing rapidly in the aftermath of apartheid.

Exhibit II-8

Internet/Intranet Software and Services Market, 1997-2002: Middle East and Africa

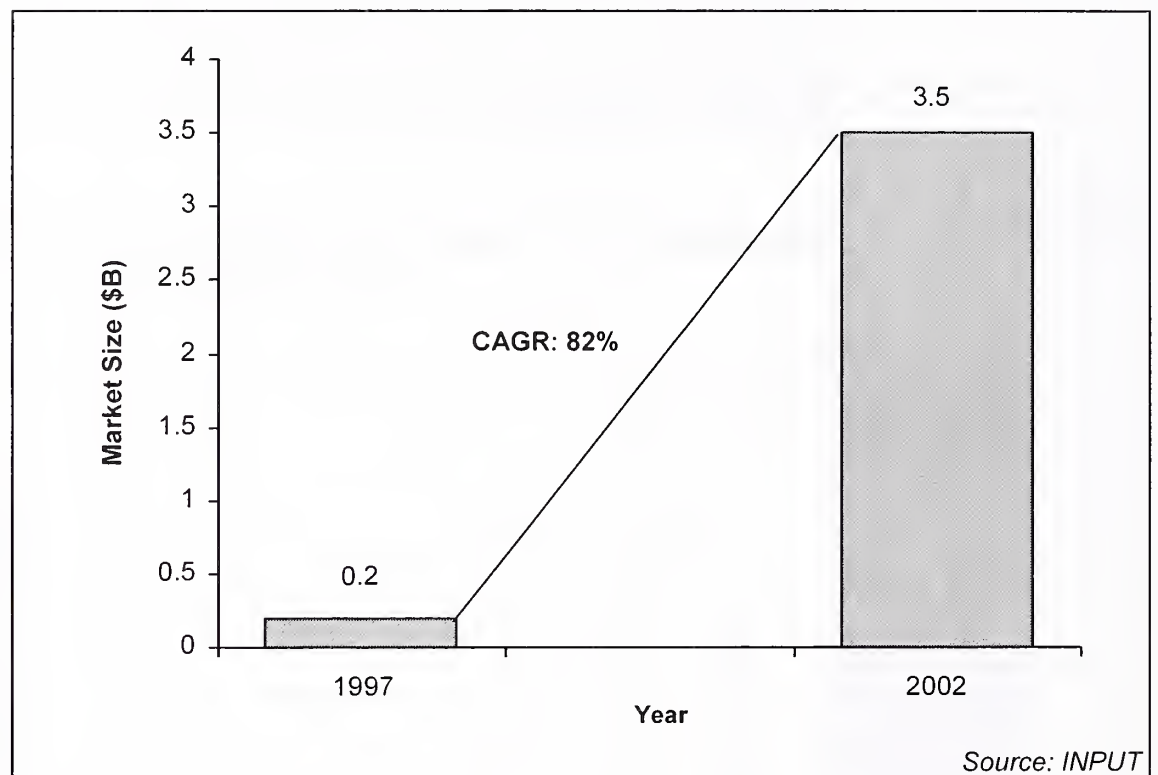


5. Latin America

Latin America's Internet and Intranet market will be driven largely by foreign investment. US companies operating in Latin America will invest heavily in Intranet and Extranet products and services, following domestic Intranet/Extranet developments.

Exhibit II-9

Internet/Intranet Software and Services Market, 1997-2002: Latin America



D

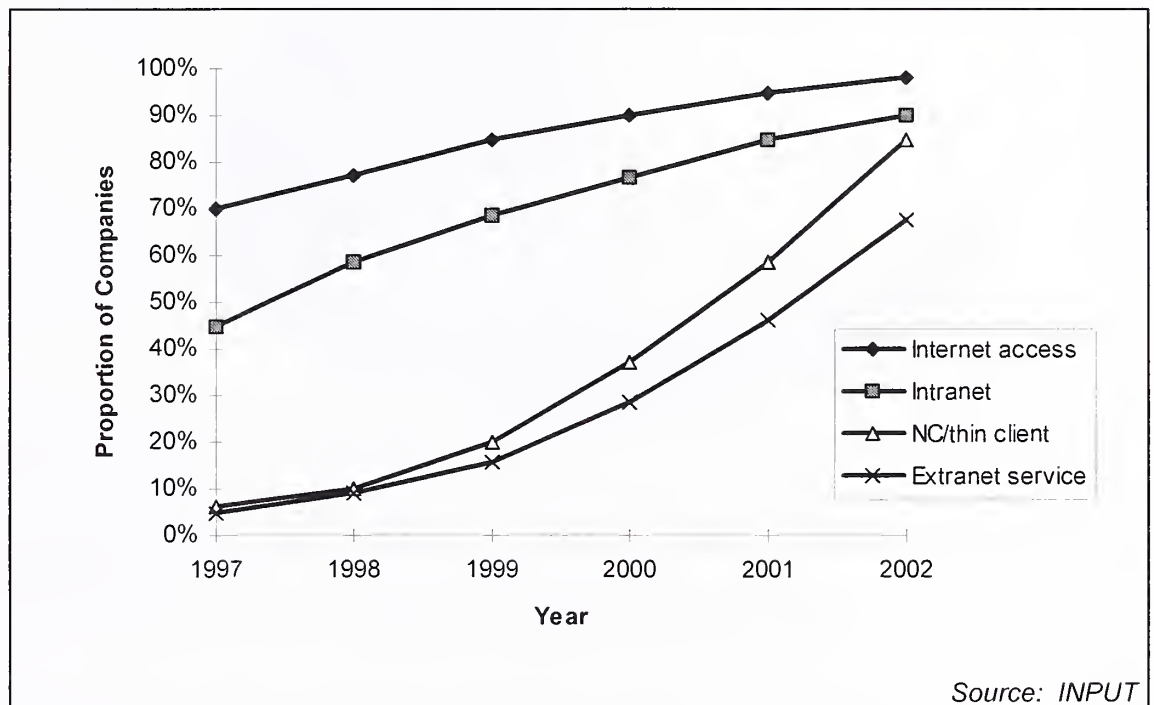
Product and Service Markets

Exhibit II-10 shows the expected takeup by US corporations of some of the major Internet and Intranet technologies and services between 1997 and 2002.

By 2002, these technologies and services will be in place in most companies. The following sections discuss each in more detail.

Exhibit II-10

Takeup of Internet/Intranet Technologies and Services, US



1. Network Computers

Network computers (NCs) have not achieved the level of sales expected two years ago. In a previous report (*Use of Internet Appliances in the Corporation*, 1996), INPUT forecast that NCs would not replace PCs, but would instead provide a migration path from terminals, and give computing devices to employees previously with no or limited access to computers. Some PCs would be replaced (15% by 2000), in most cases where PCs were deployed inappropriately through lack of a viable alternative.

The NC market has to date comprised mostly terminal replacement, as predicted. However, this market is now being targeted also by the PC

industry, as leading PC hardware and software vendors have reacted to the NC threat. The result is a blurring of the boundaries between PC and NC. The critical differentiators of NCs are being implemented in PC hardware and software design, notably: centralized application and data storage and management, remote system administration (such as Microsoft's Zero Administration initiative), and reduced purchase and operating costs.

In addition to PCs beginning to match the advantages of NCs, they retain the familiar operating environment and interface, easing user concerns over large scale transitions. NCs (including in that definition the emerging centralized, thin-client Windows-based PCs) will achieve rapid market growth as a result of Microsoft's Windows Terminal Server and Windows NT 5.0.

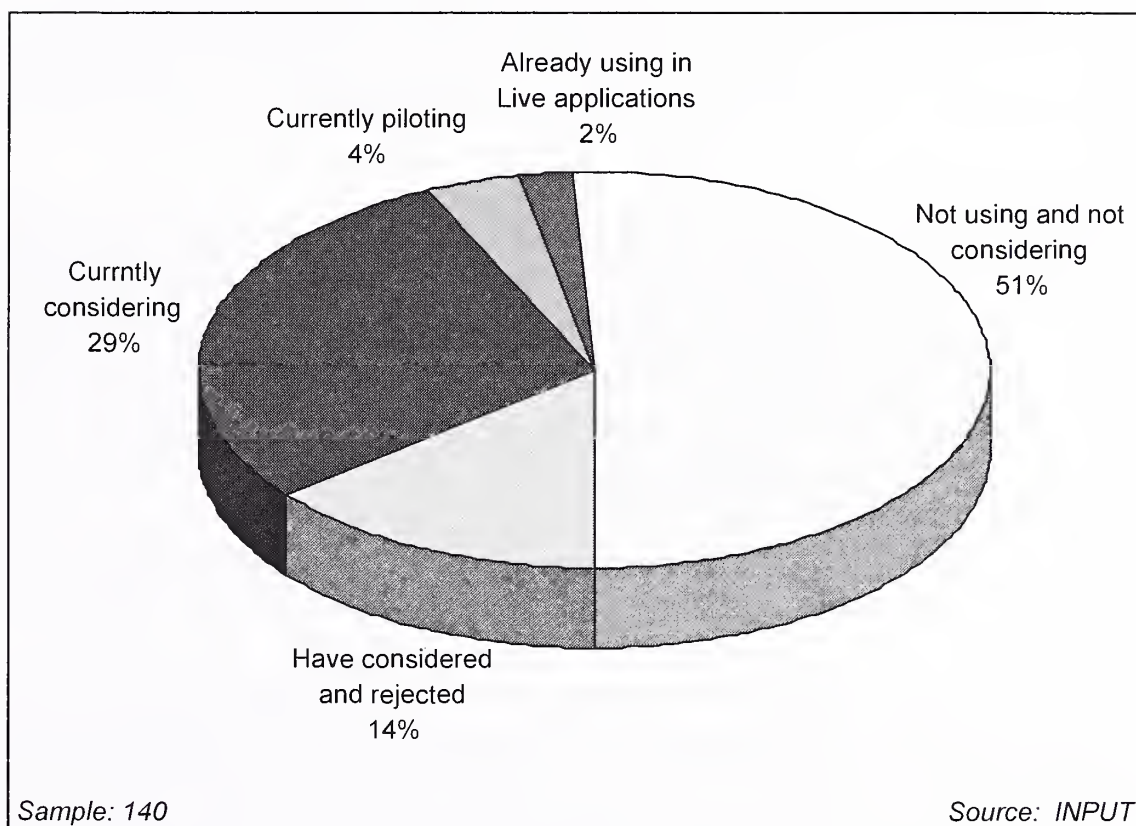
Success in the client platform market between 1997 and 2002 will depend on support for a broad range of technologies and protocols (Windows, Java, mainframe/mini/X terminal). The most successful thin clients will be the emerging generation of cut-down PCs, beginning with NetPCs and Windows terminals.

Evidence of this comes from INPUT's report, *The Impact of Network Computers on the Selection of Internet/Intranet Platforms* (1997). Of respondents across the US and Europe, 47% considered a Windows terminal to be the most suitable type of thin client for their organization, and only 16% considered a Java-centric terminal (such as the Sun Javastation) to be most suitable.

Exhibit II-11 shows the usage of NCs as of end-1997. The data is taken from the above mentioned report.

Exhibit II-11

Use of Network Computers (End-1997), US and Europe



Examples of NC customers in different industries include:

- Finance—Nomura International
- Telecommunications—BT Service View
- Retail—Safeway
- Services—Eurodollar.

2. Java

Java is more than a programming language. By “Java”, INPUT means the language, the execution environment (Java Virtual Machine, or JVM), and the standards required to fulfill Java’s original promise of “write once, run anywhere”.

The Java industry has grown at an extremely high rate, driven largely by venture capital-funded startup organizations and, since 1996, major development efforts by established IT vendors. As with NCs, however, Java has not yet achieved its potential.

Significant efforts have been made to address technological problems that have put it at a disadvantage in comparison to other languages optimized for individual platforms, such as breadth of functionality and speed of code execution, but several problems remain, including:

- The Java specification is not yet controlled by an independent standards organization
- Not all Java developers are committed to adhering to future specifications.

The latter problem is a serious obstacle to Java’s ability to live up to expectations. For developers and users to gain the benefits associated with a “write once, run anywhere” software model, all platforms must support the same Java specification, yet some vendors are threatened by the platform transparency that Java can potentially deliver. Most notably, Microsoft is threatened by a software model that removes the tight links between application and operating system. In order to retain its installed base, it is integrating Windows-specific functionality into its version of Java that may fragment Java into several platform-specific versions. Java could follow UNIX in becoming an “open system” that suffers considerable portability and compatibility problems.

Despite this current problem, Java development is accelerating rapidly in all areas of the software industry including:

- Retail applications—the JavaPOS protocol, released by Sun in January 1998, provides a set of specifications for use of Java in retail point-of-sale devices such as bar code readers and cash tills. At the time of release, several US retailers including J.C. Penney, Sears, and Home Depot, were developing JavaPOS-based applications in their stores, supported by vendors including IBM, NCR, and Datafit

- Embedded devices—Motorola has licensed Java for use in embedded devices such as smart cards, automotive components, and wireless devices, as well as for internal development.
- Enterprise applications—a startup company Adaptivity (San Mateo, California, US) has developed EnterpriseNet Solutions, a suite of “Pure Java” customer interaction applications including help desk, contact management, defect tracking, collaboration, information management, and data reporting application modules

3. Intranets

According to INPUT's report *The Impact of Network Computers on the Selection of Internet/Intranet Platforms* (1997), 50% of large companies (annual revenues of \$100 million and more) in the US and Europe already have an Intranet (58% in the US, 41% in Europe). This has increased considerably from 1996, when around 15% of companies had completed development of an Intranet. IT vendors are using their own large-scale Intranets to gain knowledge of Intranet development and management and as case studies for prospective customers of Intranet development services; for example, AT&T's Intranet supports 60,000 staff and BT's supports 80,000.

INPUT expects the proportion of corporate networks that has had the infrastructure capable of supporting an Intranet (the IP protocol) by 2002 to be at least 95%. Not all networks that can support Intranets will, but the productivity benefits and cost savings of Intranets will ensure that, by 2002, over 85% of the world's corporations will have in place an enterprise-wide Intranet.

The components of network-centric electronic business are manifold, and some technologies current in 1997 will not be part of the mainstream in 2002, but it is clear that the basic Intranet model—use of a common, “open” network architecture, information access via a universal client, de-emphasis of hardware and operating system platform—has been well received by users and will form the basis of the future computing environment. Specific technologies such as the NC and Java may be superseded, but Intranets are a long-term proposition.

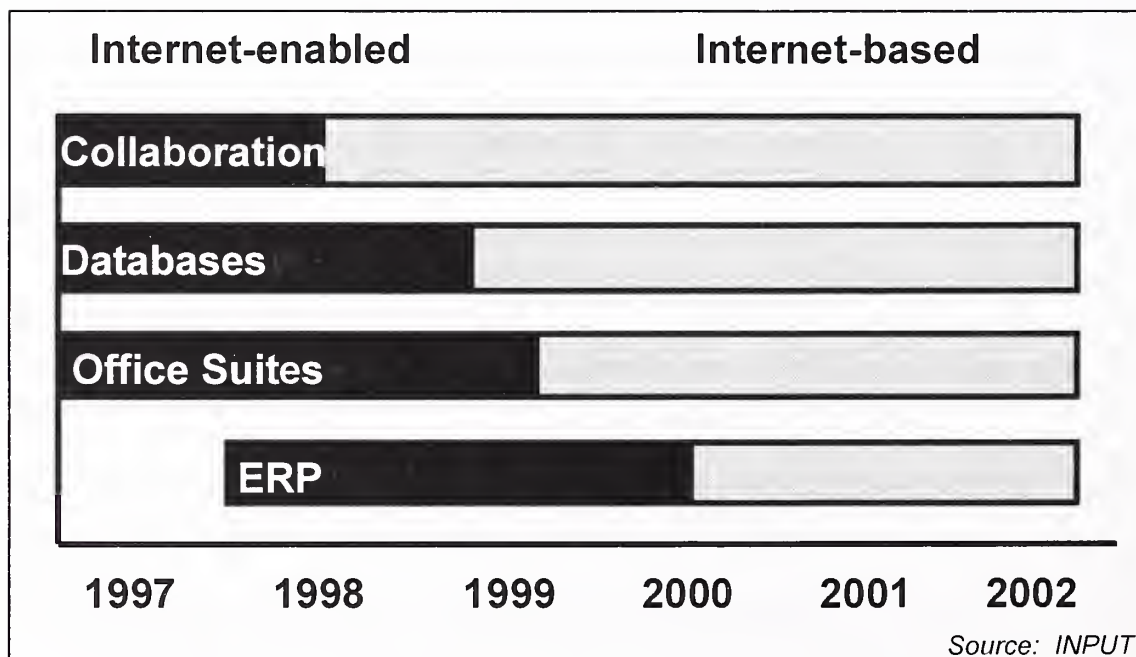
4. Application Software

Internet application software is following Internet systems software by becoming increasingly commoditized and, subsequently, falling in price. As systems software such as Web browsers and servers are increasingly provided at low or no cost, or bundled into operating systems (for example, Netscape's decision of January 1998 to stop charging for Communicator and to release its source code), so certain aspects of application software will be provided for little or no cost. Basic collaborative working functionality, for example, is bundled into Web browsers such as Netscape's Communicator and Microsoft's Internet Explorer. As a result, software revenues will experience a shift towards the server, as much of client software becomes seen as a no-cost item.

Exhibit II-12 shows the stages at which application software will become Internet-enabled (supporting Internet/Intranet operation through plug-ins or external third party programs) and Internet-based (supporting Internet/Intranet at all levels within the application).

Exhibit II-12

Transition of Application Software to the Internet/Intranet Platform



a. Collaboration Software

Lotus Notes has a clear lead in the groupware market, and it has successfully made the transition to the Internet/Intranet model with the support of the Lotus Domino server.

Collaborative working, encompassing groupware, conferencing, document sharing, project management and messaging, is an inherently network-centric application. For this reason, collaborative applications were the first to begin migrating to the Internet and Intranet environment.

Collaborative software packages will continue targeting Intranets and will also offer hooks to Extranet and Internet commerce applications. As the functionality of groupware applications such as Notes expands beyond document publishing and team working, and is able to provide vertical applications such as customer service and purchasing, so groupware will begin to compete with ERP solutions in the Web-enabled Intranet application software market.

INPUT expects Lotus to retain a leading position in the Internet-enabled groupware market, but its share will decline as:

- The major Web browser vendors integrate groupware functionality (for example, Microsoft is entering the market through components such as Exchange and NetMeeting and the integrated Internet Explorer client, and Netscape has bundled groupware components into Communicator).
- Internet-based multimedia conferencing applications (providing Internet-based voice and video) increase in functionality to include remote collaborative working.

Conferencing applications will be marketed by technology innovators such as Real Networks (RealAudio and RealVideo), established IT companies as they develop their own technology or acquire early innovators, and network equipment vendors such as Cisco.

b. Databases

Early interactivity between Web user and server was provided via CGI (common gateway interface)—the Web server would pass control to an external scripted (e.g. Perl) or compiled (e.g. C) program, which in many cases would perform its own query on a database and pass the results back to the Web server.

Current releases of leading databases, however, are able to communicate with Web servers directly. In mid-1996, Oracle, Informix, and Sybase each announced plans to provide links between their databases and Web servers. Database products are becoming increasingly tightly integrated with the Web and Intranets:

- Oracle—is heavily committed to the Intranet market and has taken a lead in the NC market as well as providing Internet/Intranet support such as Java and CORBA within the Oracle database. Examples include the Oracle Lite client-side database designed for Java-based NCs, the Developer/2000 Server package for migrating existing client/server applications to an Intranet environment, and Oracle Application Server 4 which provides a central point of access to databases and applications for any Intranet client type.
- Informix—has extended its Informix Dynamic Server database platform via the Universal Data Option add-on to encompass Internet and Intranet protocols, data formats, and Datablade plug-in modules. In addition, the company's Web Integration Option for Informix Dynamic Server acts as a Web application server between the database and Web server and includes a development environment and session management tools for 'on the fly' Web publishing from the database.
- Sybase—the Adaptive Server enterprise database is built on a componentized, object-based model and supports Java on the client and server. The PowerDynamo component is a Web application server that supports dynamic Web page creation from database content.

The established database vendors are approaching the Intranet market with at least two goals:

- The need to remain competitive and offer leading-edge technology.
- The need to offer solutions to the lower end of the market, as the high-end enterprise database market becomes increasingly crowded.

Some traditional RDBMS vendors posted poor financial results during 1997. To address future business and compete in the rapidly growing Intranet environment, they need to target the workgroup, departmental and small business markets

In addition to established vendors, the Intranet database market is being targeted by startup organizations, including:

- Netiva—develops and markets the Java-based database application system Netiva, designed for customer service and sales applications. Access to applications is via a Java-based Web browser.
- Cloudscape—develops and market JBMS (Java relational database system). JBMS is an object-based system that supports Java, and can be embedded in client-side applications.

INPUT expects basic database platforms to be integrated into operating systems, notably SQL Server with Windows NT, allowing low-end database applications to be developed without a third party database.

c. Office Suites

The office suite market is dominated by Microsoft Office, with a share of over 80% of the installed base. Lotus SmartSuite is second with a share of around 10%, although it accounted for nearer 25% of 1997 shipments due to OEM bundling deals with PC manufacturers. Both suites are rapidly gaining native support for Internet technology and protocols.

Lotus has developed e-Suite (formerly known as Kona WorkPlace), a desktop environment written in Java for PCs and NCs that accepts small, task-specific applets from a central server. Lotus is targeting NC users whose clients work most efficiently with a componentized software model, and PC users who cannot cost effectively use and manage a full-functioned locally stored office suite. e-Suite's Java applets include: wordprocessor, spreadsheet, presentation graphics, calendar, and project scheduler.

Microsoft Office's Internet/Intranet functionality is increasing with each release. Office 95 supports Internet and HTML plugins, Office 97 has integrated Internet/HTML capabilities, and future versions of Office will support HTML as a native file format.

During 1999, office suites will complete the transition from Internet-enabled to Internet-based, and will become integrated components of an Intranet application environment. Microsoft will continue to dominate the market due to the tight integration of operating system, applications and Web browser on the client, and operating system, database, and Web server on the server.

d. ERP Applications

ERP solutions have, until 1997, lagged collaborative, database, and office suite software in supporting Internet and Intranet computing. Their

integration with, and support for Intranets has, by necessity, followed the takeup of Intranets as an enterprise-wide network model, as opposed to a piecemeal, ad hoc development.

SAP's R/3 is increasingly becoming Internet- and Intranet-enabled. R/3 components designed for Internet and Intranet use, accessed via a standard Web browser, include:

- Employee self service—staff lists, employment opportunities
- Electronic commerce—catalog, order processing, account management
- Internal services—project management, workflow, asset management
- Customer services—quality certificates, service notification
- Purchasing—requisition placing, procurement status tracking

With 13,000 R/3 installations and 2.2 million users worldwide as of end-1997, Internet-enabling R/3 will help SAP to keep its share of the ERP market and grow future business. In fact, it is essential that SAP and other ERP vendors provide comprehensive Internet/Intranet support to be capable of competing in five years' time. Since releasing Internet add-ons to R/3, SAP's revenue growth has accelerated: in 1997, revenues increased by 62% over the previous year, to \$3.5 billion. That growth has been equaled only once in the previous five years (1994).

All ERP solutions vendors will accommodate Internet and Intranet technology. Baan, JD Edwards, and Oracle, for example, have Internet-enabled their ERP solutions, providing access to application modules via a Web browser.

The Internet-based ERP market will be populated primarily by the established ERP vendors that build Internet/Intranet support into their products and services. In addition, however, startup companies will target the ERP market, using the Internet as a low cost software delivery platform, and Java as an efficient way of targeting multiple platforms and the emerging population of thin client users. Adaptivity is such a vendor and (as described above under section "2. Java") has developed a Java-based customer interaction suite aimed at existing ERP customers.

5. Extranets

ISP offerings are maturing rapidly beyond simple Internet access. Internet services buyers require a variety of services alongside Internet

access including hosting, commerce, and Internet-based VPN (virtual private network, also: 'Extranet') services, as they integrate their EDI and VPN networks into their Internet/Intranet infrastructure to link branches, mobile/home workers, suppliers, and customers.

Relatively few companies have implemented an Internet-based Extranet to date, and only around 20 network services companies or ISPs can currently provide a secure international Extranet service. The Extranet market will grow rapidly from 1999/2000, following:

- Widespread internal Intranet implementation
- The resolution of Internet security technology issues including encryption, tunneling and payment mechanisms
- Increasing openness of the European telecommunications market following deregulation at the beginning of 1998
- Increased acceptance of the Internet as a business environment
- Ongoing consolidation of the ISP market as telcos develop their Internet service offerings through internal development and mergers/acquisitions.

Early players in the Internet-based Extranet market include:

- IBM Global Network
- CompuServe
- Cable & Wireless
- Worldcom/UUNET
- Infonet.

By 2002, the leading suppliers of international Extranet services will be:

- Telcos currently engaged in mergers and acquisitions in preparation for the future Internet-based voice/data services market, such as Worldcom and AT&T.
- Consortia and joint ventures between existing network services providers and telcos, such as Global One and Concert.

- Major ISPs and network services providers who position themselves to offer voice and data services over the Internet differentiated from other ISPs by quality of service guarantees, global coverage, and breadth of wireless and fixed access, such as Infonet and Equant.

6. Internet Access

Telcos are claiming an increasing share of the Internet access market, both consumer and business. The Internet access market will consolidate between 1997 and 2002, with telcos taking the majority share through competitive offerings, integrated phone/Internet services and billing, and acquisition.

The most striking example of this consolidation, particularly during 1997, is Worldcom. Over the past two years, Worldcom has acquired, or merged with MFS Communications (thereby also acquiring UUNET), MCI, Compuserve, AOL ANS, and Dutch ISP NLnet, becoming one of the future most influential Internet services companies.

As in all Internet markets, the US has achieved the highest penetration rates of any region. Growth in the Internet access market in Europe, however, will accelerate from 1999 onwards due to the European-wide telecommunications deregulation effective January 1st, 1998. In several European countries, cost of Internet access (ISP subscription plus telco charges) is prohibitively high for small businesses. Deregulation will allow independent carriers and Internet access providers entry to previously restricted national markets and will (gradually) lower prices through competition.



Total Internet/Intranet Market

A

“Total Internet Market”—Definition

This market forecast is concerned primarily with IT software and services spending related to Internet and Intranet products and services. IT software and services comprises the following categories:

- Professional services
- Systems integration
- Outsourcing
- Processing services
- Network services
- Applications software products
- Systems software products
- Turnkey systems
- Equipment services

Within these definitions, equipment is counted where it is part of a service contract.

Software and services is not the whole market, however. This chapter measures and forecasts the regional Internet/Intranet markets for all IT expenditure in the following categories:

- Equipment—all computer and network hardware equipment, whether provided ‘as is’ or within a service contract

- Data communications—telco services such as leased line and ISDN used for data. This category counts only line rental; ISP expenditure is counted in network services within software and services
- Software products—all systems and applications software
- IT services—all services, not counting hardware or software provided as part of a service contract
- In-house staff—salary-related costs associated with employing technical IT staff.

B**Total Internet-Related IT Expenditure, All Regions**

Exhibit III-1 shows comparative Internet- and Intranet-related expenditure on all IT for all regions.

Exhibit III-1

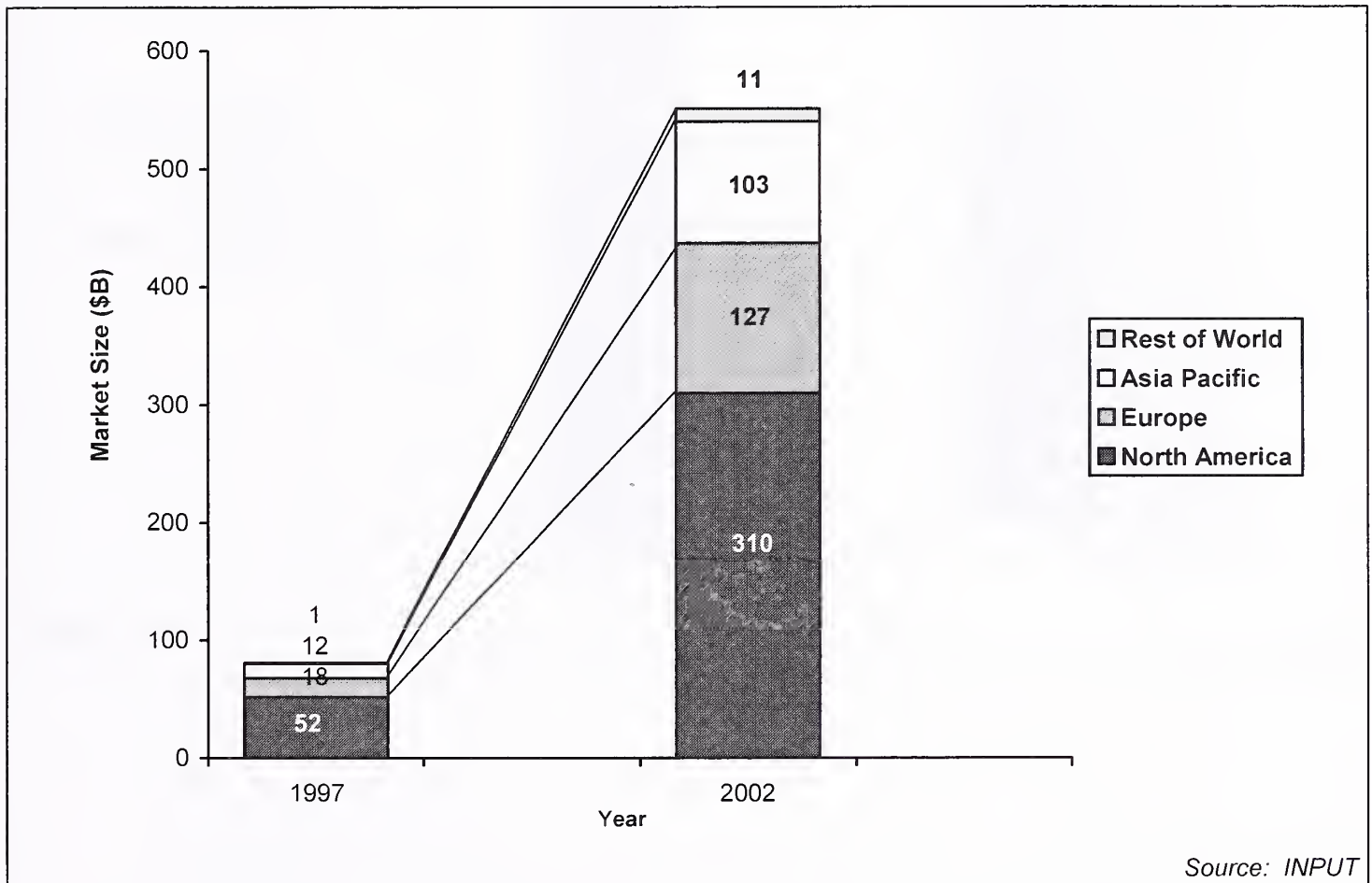
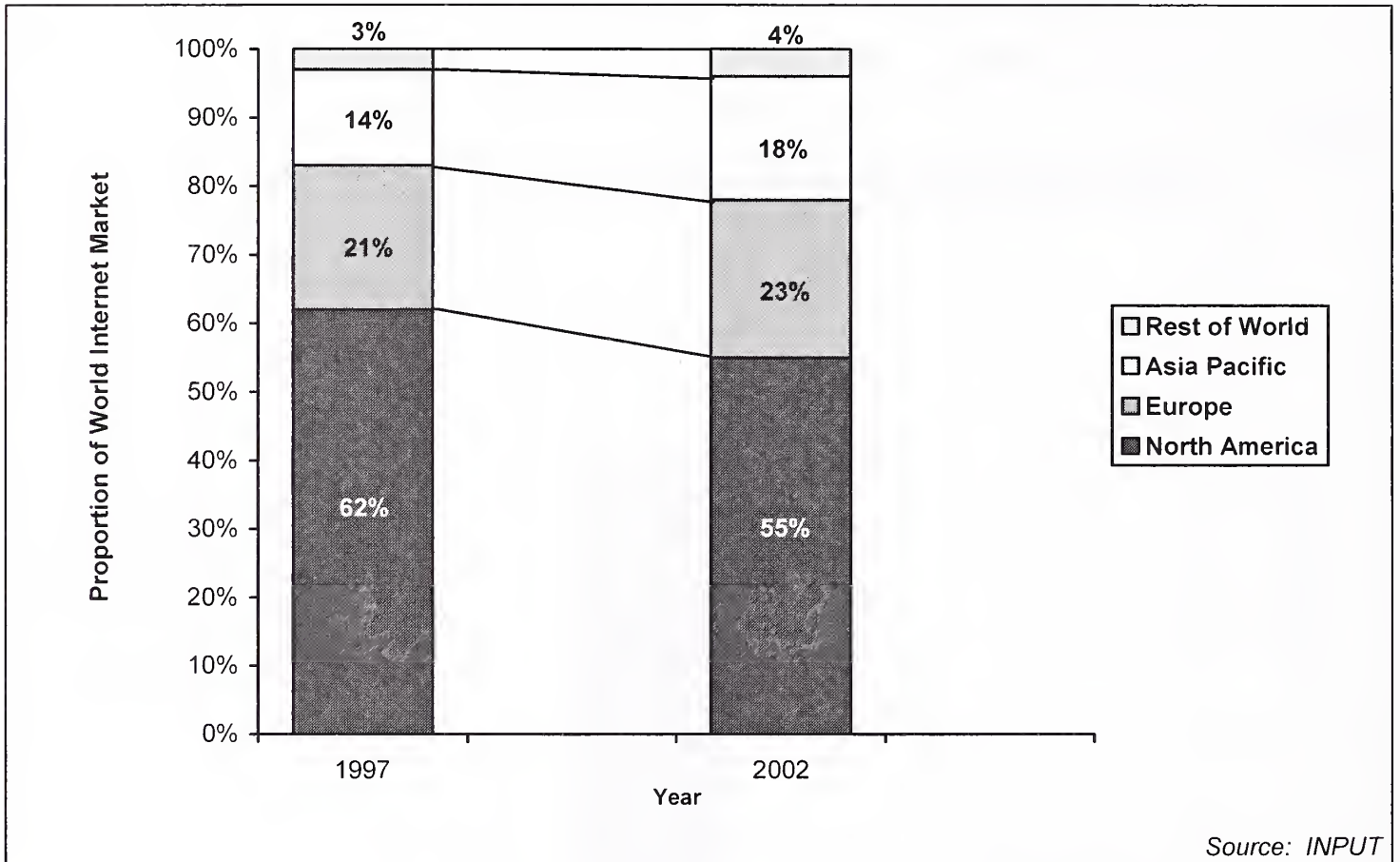
Total Internet/Intranet Market, 1997-2002 by Value: All Regions

Exhibit III-2 shows total Internet- and Intranet-related expenditure for all regions as a proportion of the worldwide market.

Exhibit III-2

Total Internet/Intranet Market, 1997-2002 by Proportion: All Regions



C

Total Internet-Related IT Expenditure by Region

Exhibits III-3 to III-8 show total Internet- and Intranet-related expenditure by region.

Exhibit III-3

Total Internet/Intranet Market, 1997-2002: Worldwide

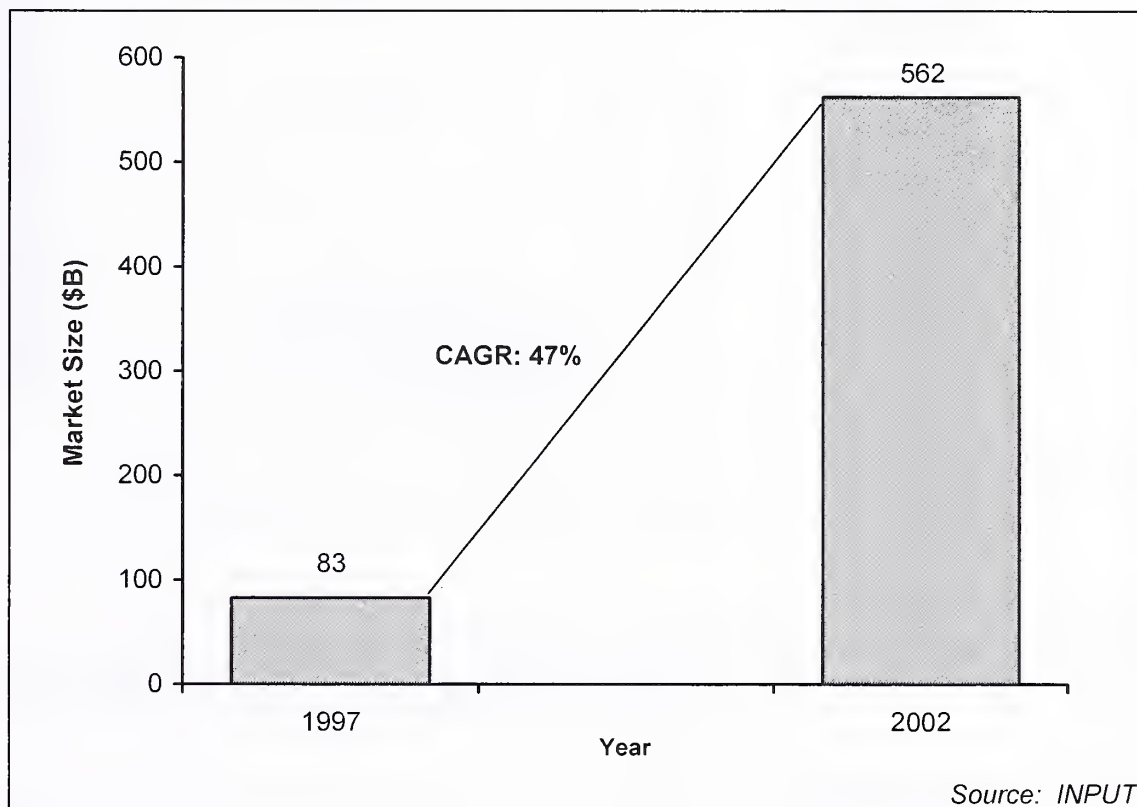


Exhibit III-4

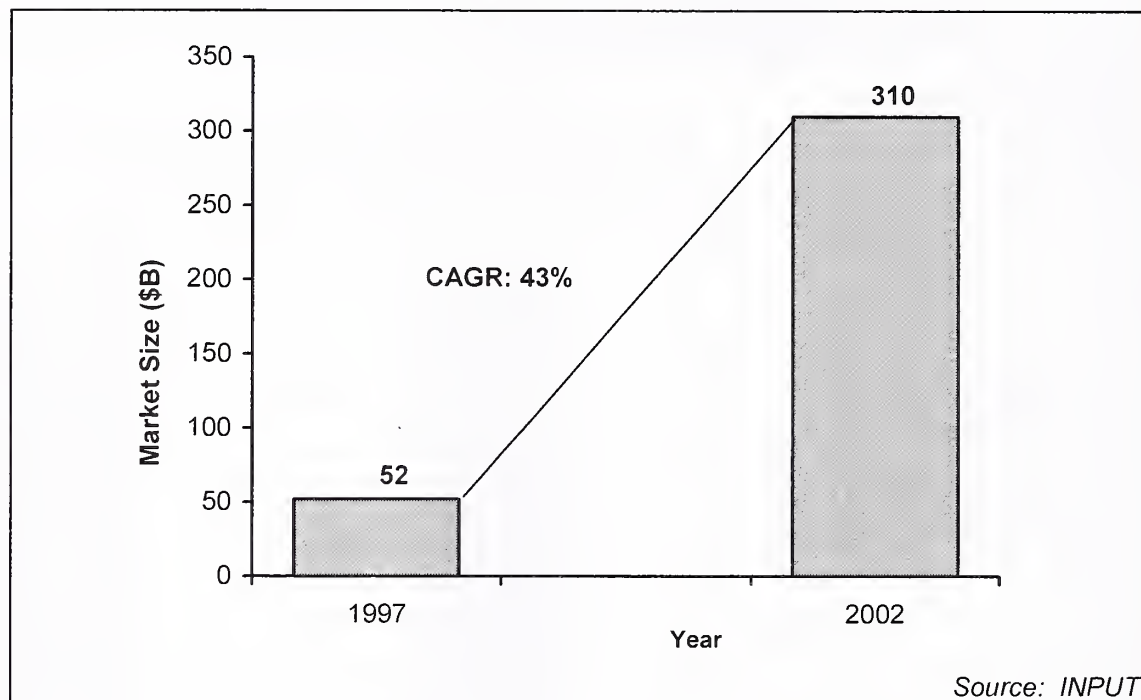
Total Internet/Intranet Market, 1997-2002: North America

Exhibit III-5

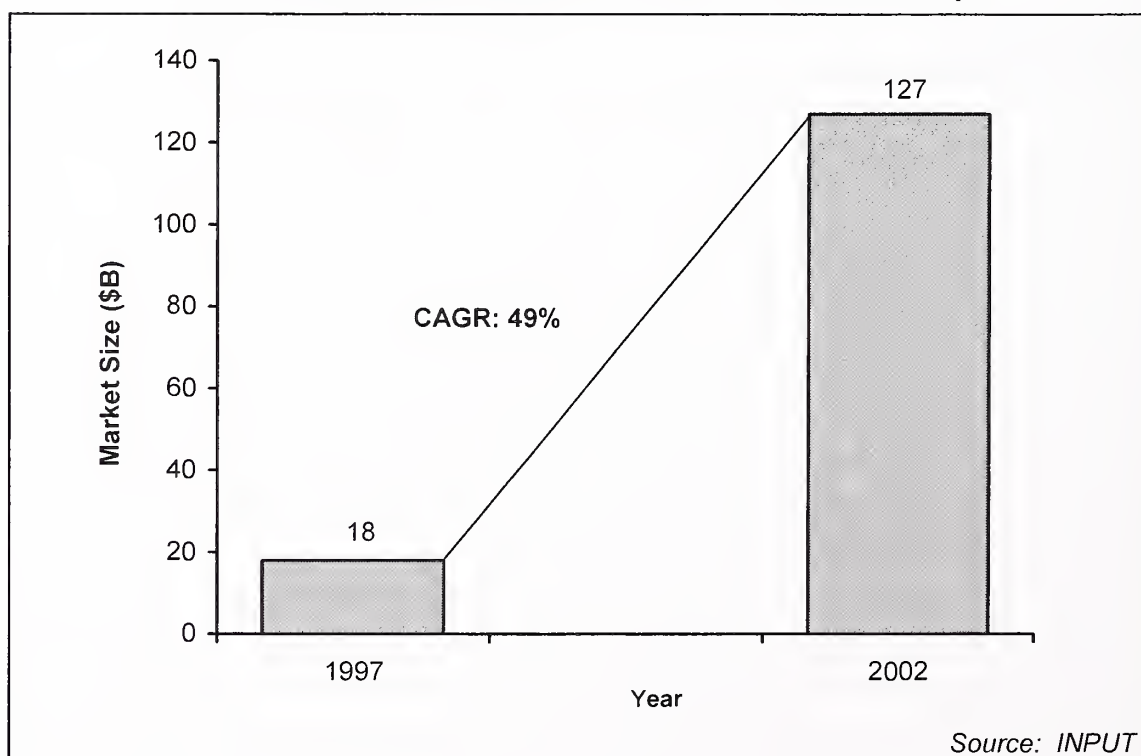
Total Internet/Intranet Market, 1997-2002: Europe

Exhibit III-6

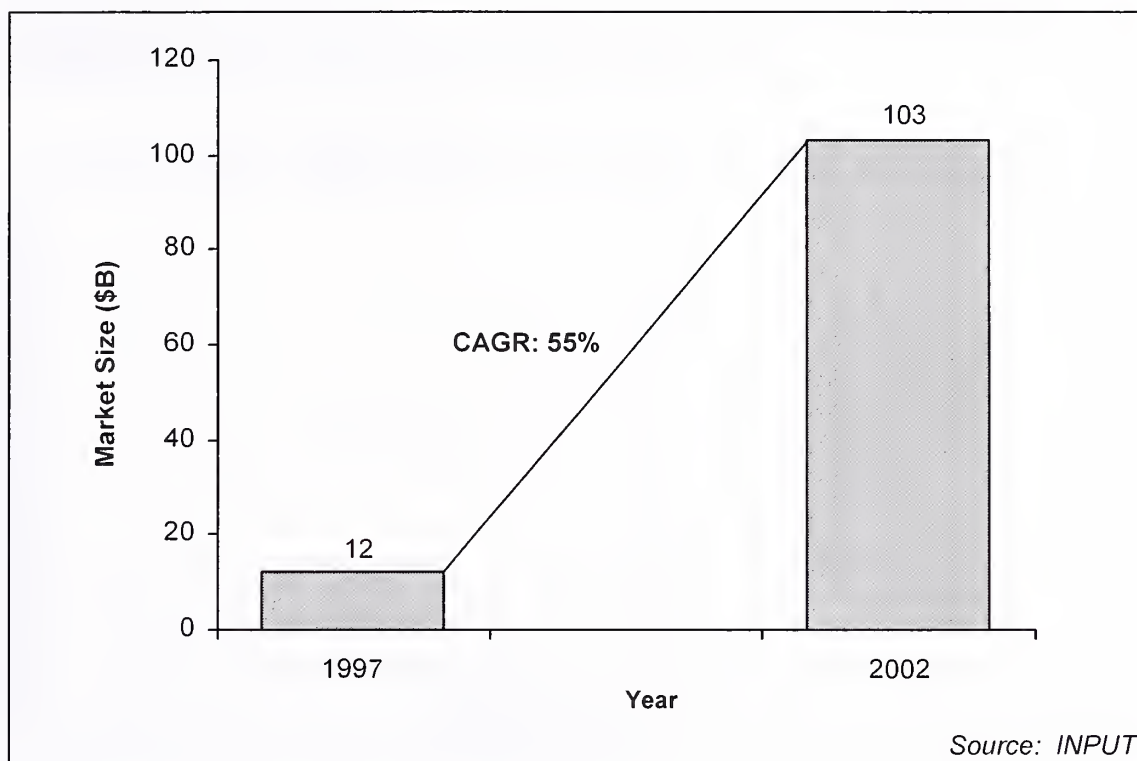
Total Internet/Intranet Market, 1997-2002: Asia Pacific

Exhibit III-7

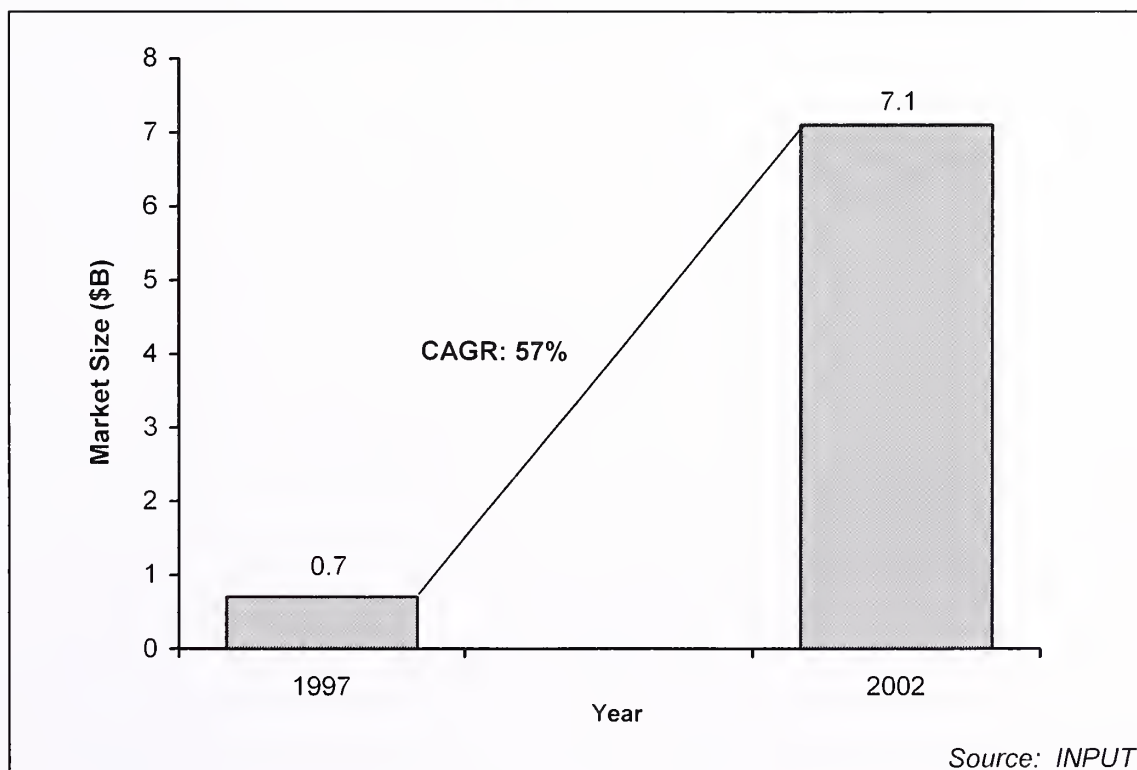
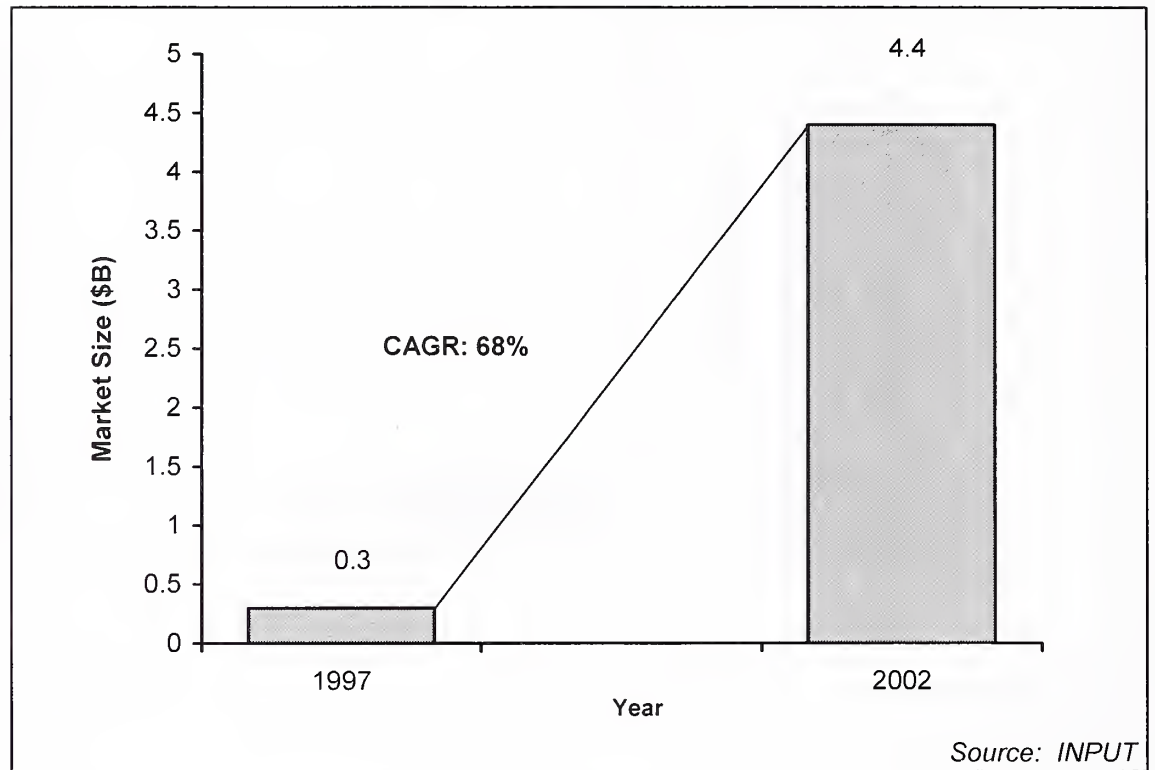
Total Internet/Intranet Market, 1997-2002: Latin America

Exhibit III-8

Total Internet/Intranet Market, 1997-2002: Middle East & Africa



Internet Market Characteristics

A

Growth Rates

Exhibits IV-1 and IV-2 show Internet/Intranet market sizes for each country and region, sorted in order of 1997 market size and 2002 market size respectively. Exhibit IV-3 shows each country and region sorted in order of growth rates from 1997 to 2002. As one would expect, the US is by far the largest country market, followed by Japan. Also to be expected is that countries and regions with low current Internet activity exhibit the highest growth rates.

Exhibit IV-1

Internet Markets 1997-2002, by 1997 Market Size

Country/Region (regions in bold)	1997 (\$m)	2002 (\$m)	CAGR 1997-2002
World	37,762	302,893	52%
North America	26,500	180,017	47%
USA	25,584	172,156	46%
Europe	6,643	62,476	57%
Asia Pacific	4,314	54,270	66%
Japan	3,865	43,479	62%
Germany	1,802	14,770	52%
UK	1,613	15,039	56%
France	1,061	12,748	64%
Canada	869	7,025	52%
Italy	523	4,807	56%
Sweden	320	2,100	46%
Netherlands	295	2,734	56%
Switzerland	191	1,616	53%
Latin America	174	3,490	82%
Belgium	149	1,211	52%
Denmark	132	1,149	54%
Middle East & Africa	131	2,640	82%
Australia	128	1,907	72%
Finland	125	852	47%
Norway	117	1,014	54%
Austria	114	1,110	58%
Brazil	107	1,867	77%
Spain	95	1,363	71%
South Korea	91	2,586	95%
Central & Eastern Europe	64	1,149	78%
Argentina	54	1,032	80%
New Zealand	49	494	59%
India	49	2,098	112%
Mexico	46	835	78%
Taiwan	35	635	79%
Singapore	34	796	88%
Hong Kong	30	544	79%
Ireland	27	416	72%
Other Asia Pacific	24	1,125	116%
Other Latin America	13	591	113%
Greece	12	217	78%
China	10	606	127%
Portugal	4	182	111%

Source: INPUT

Exhibit IV-2

Internet Markets 1997-2002, by 2002 Market Size

Country/Region (regions in bold)	1997 (\$m)	2002 (\$m)	CAGR 1997-2002
World	37,762	302,893	52%
North America	26,500	180,017	47%
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Other Latin America	13	591	113%
Hong Kong	30	544	79%
New Zealand	49	494	59%
Ireland	27	416	72%
Greece	12	217	78%
Portugal	4	182	111%

Source: INPUT

Exhibit IV-3

Internet Markets 1997-2002, by Growth Rate

Country/Region (regions in bold)	1997 (\$m)	2002 (\$m)	CAGR 1997-2002
China	10	606	127%
Other Asia Pacific	24	1,125	116%
Other Latin America	13	591	113%
India	49	2,098	112%
Portugal	4	182	111%
South Korea	91	2,586	95%
Singapore	34	796	88%
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Source: INPUT

B

Proportion of IT Market Represented by Internet/Intranet

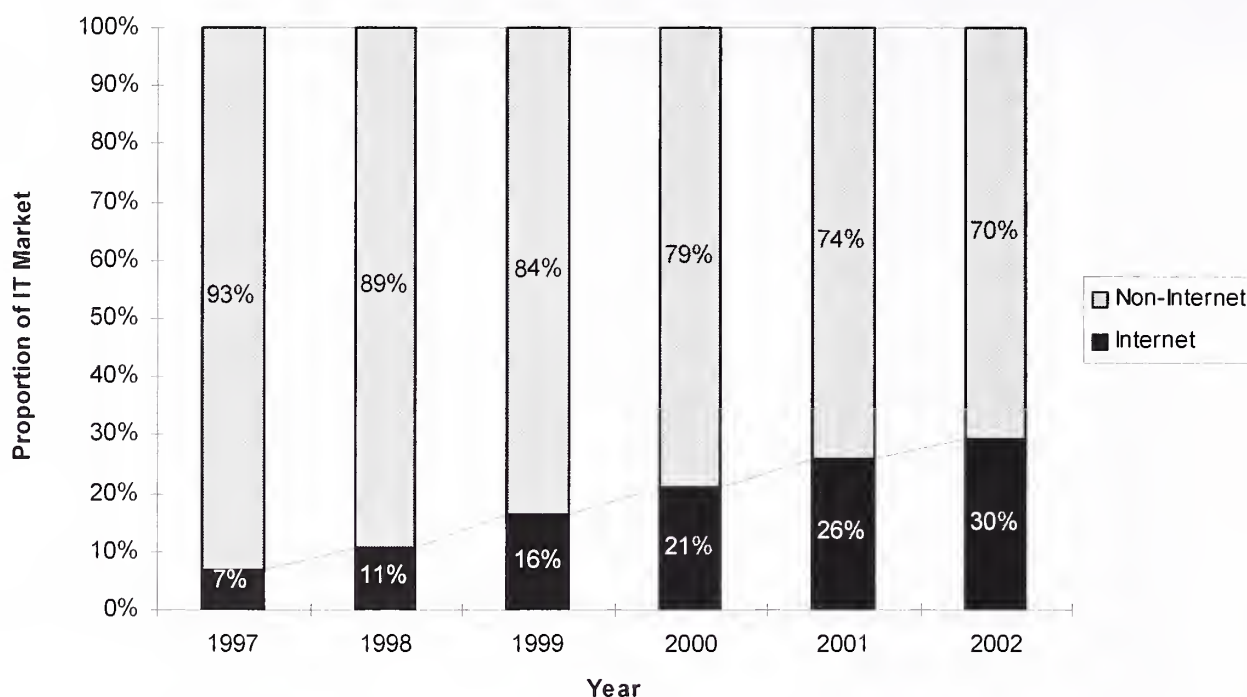
Internet and Intranet expenditure can be measured as a proportion of overall IT software and services expenditure. This is useful due to the nature of Internet/Intranet technology, products and services: they tend to be horizontal and cross-market, rather than discrete entities measurable only in isolation. With no obvious exceptions, all sections of the IT market are affected by the Internet and Intranets.

Most Internet-related expenditure falls within existing market definitions. Therefore, for example Web site development falls into the professional services category, and Web server software within the system software category.

Exhibits IV-4 to IV-9 show the proportion of each region's overall IT market that will be related to Internet and Intranet expenditure from 1997 to 2002.

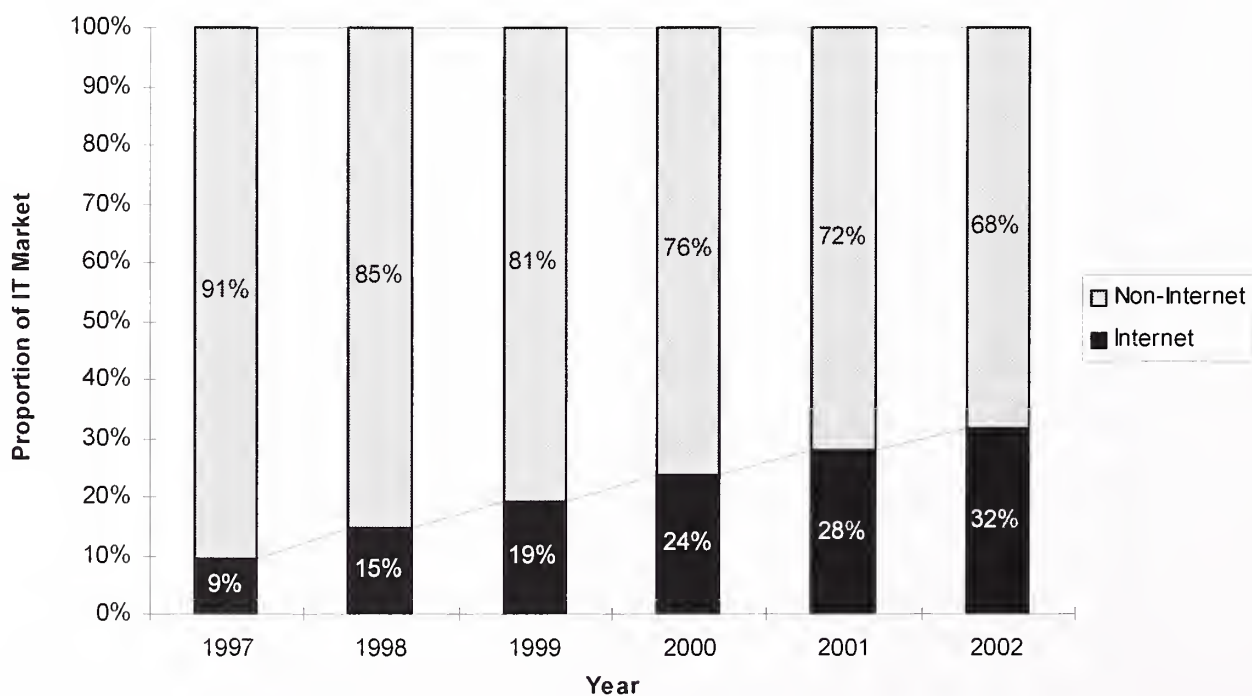
By 2002, the three major regions—North America, Europe and Asia-Pacific—will begin to show similar IT spending ratios on Internet to non-Internet.

Exhibit IV-4

Internet Market as Proportion of IT Market: Worldwide

Source: INPUT

Exhibit IV-5

Internet Market as Proportion of IT Market: North America

Source: INPUT

Exhibit IV-6

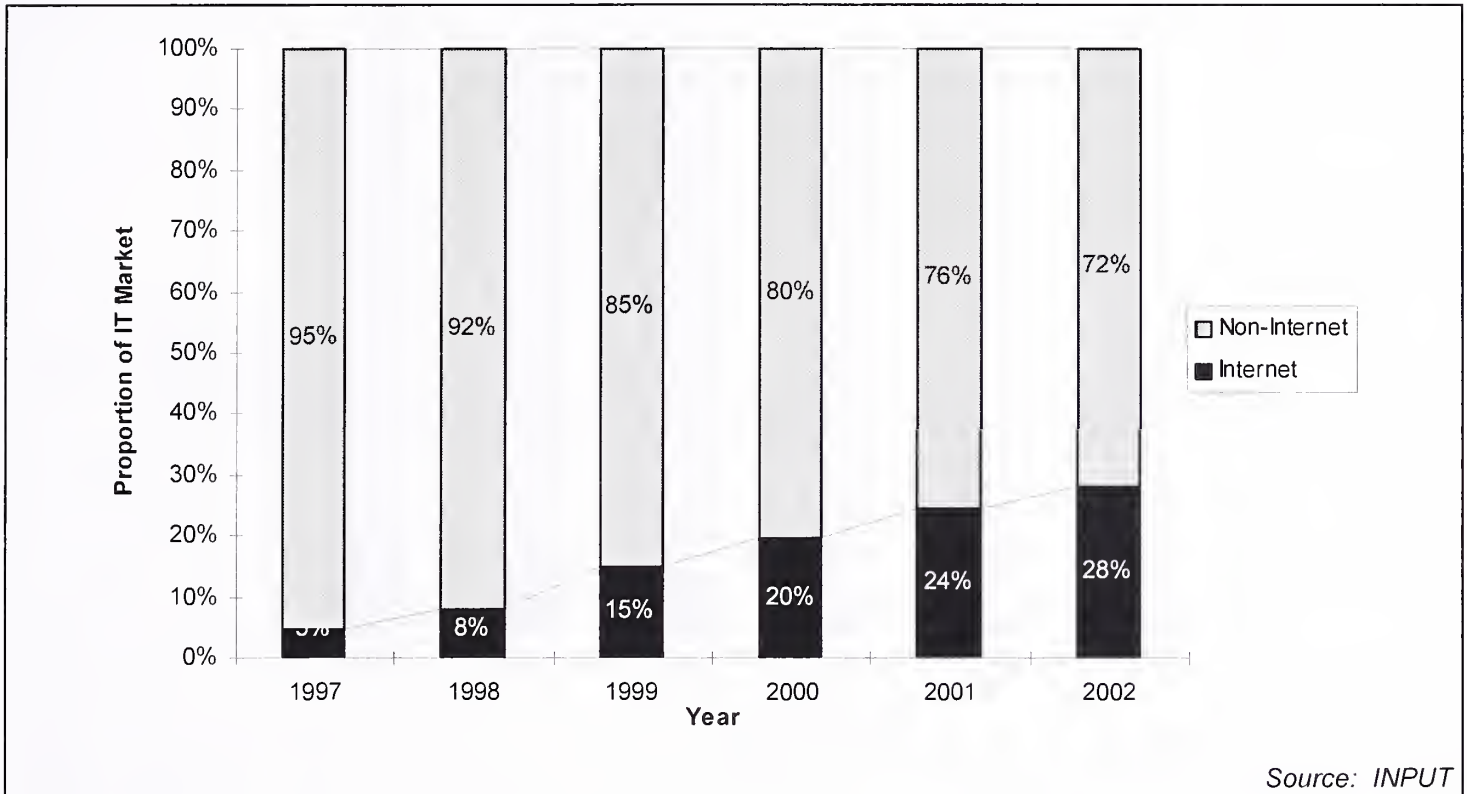
Internet Market as Proportion of IT Market: Europe

Exhibit IV-7

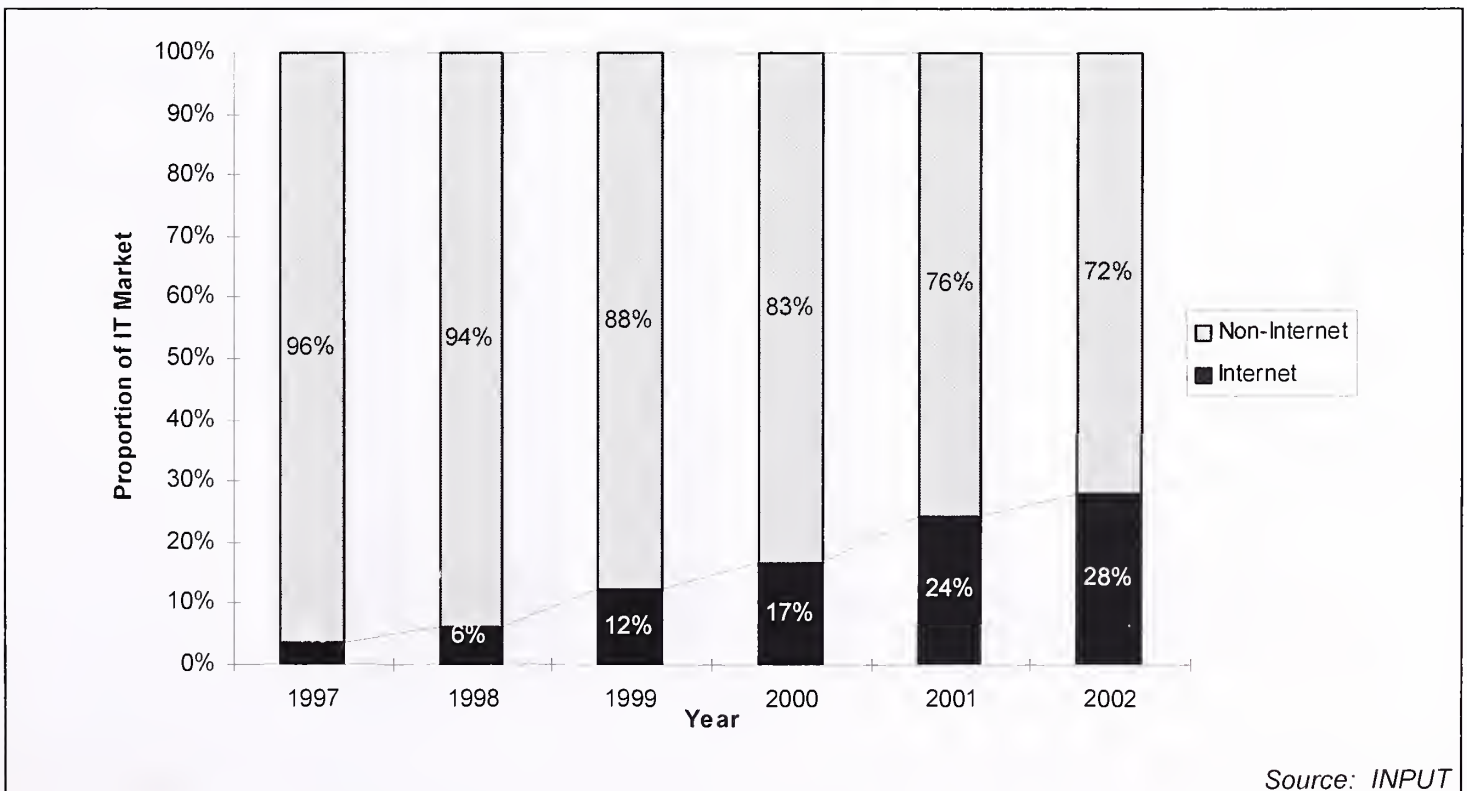
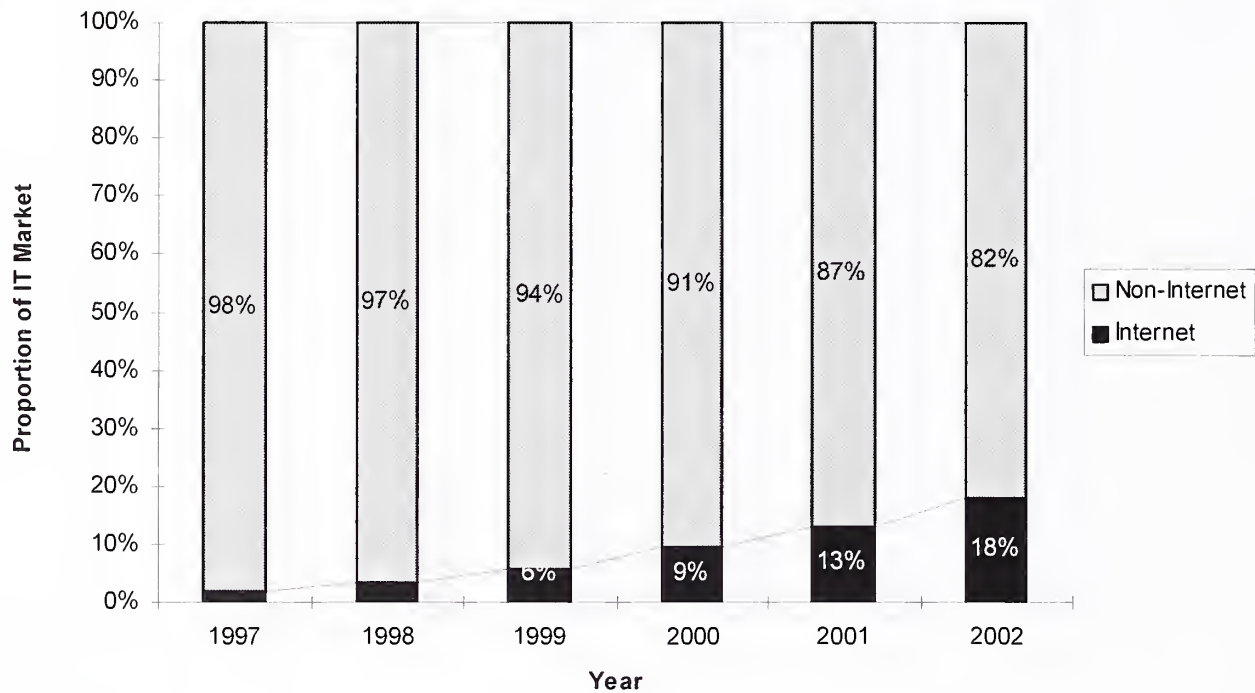
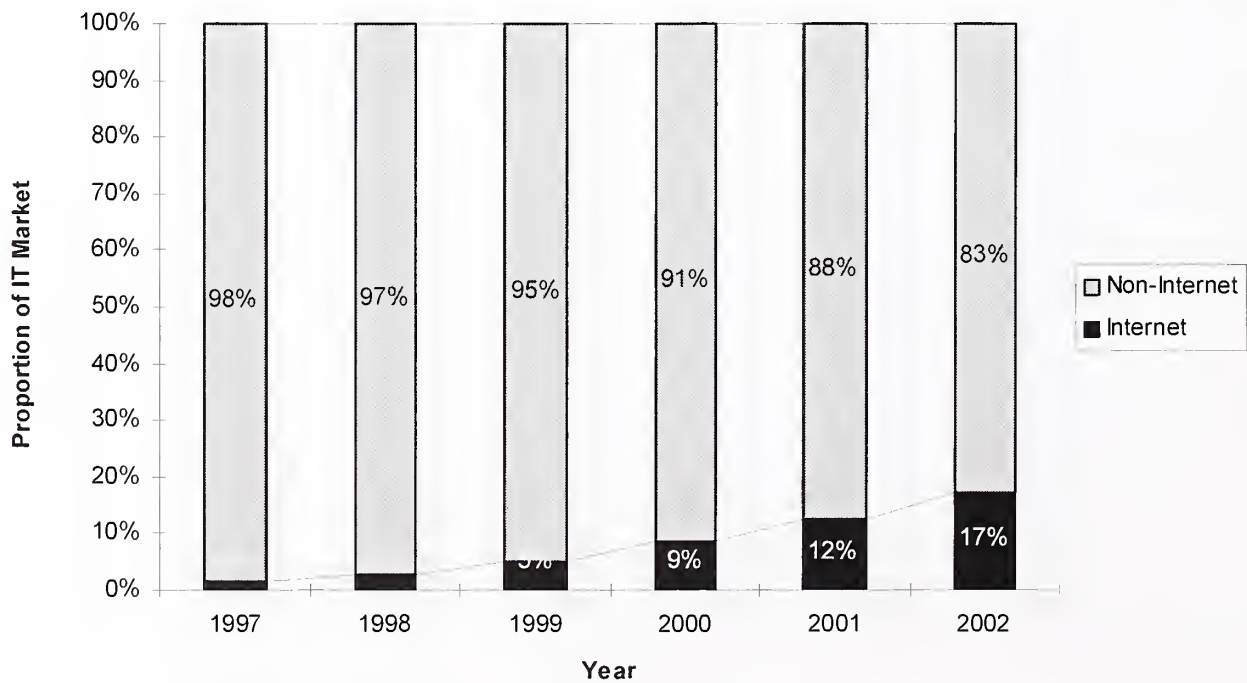
Internet Market as Proportion of IT Market: Asia-Pacific

Exhibit IV-8

Internet Market as Proportion of IT Market: Middle East & Africa

Source: INPUT

Exhibit IV-9

Internet Market as Proportion of IT Market: Latin America

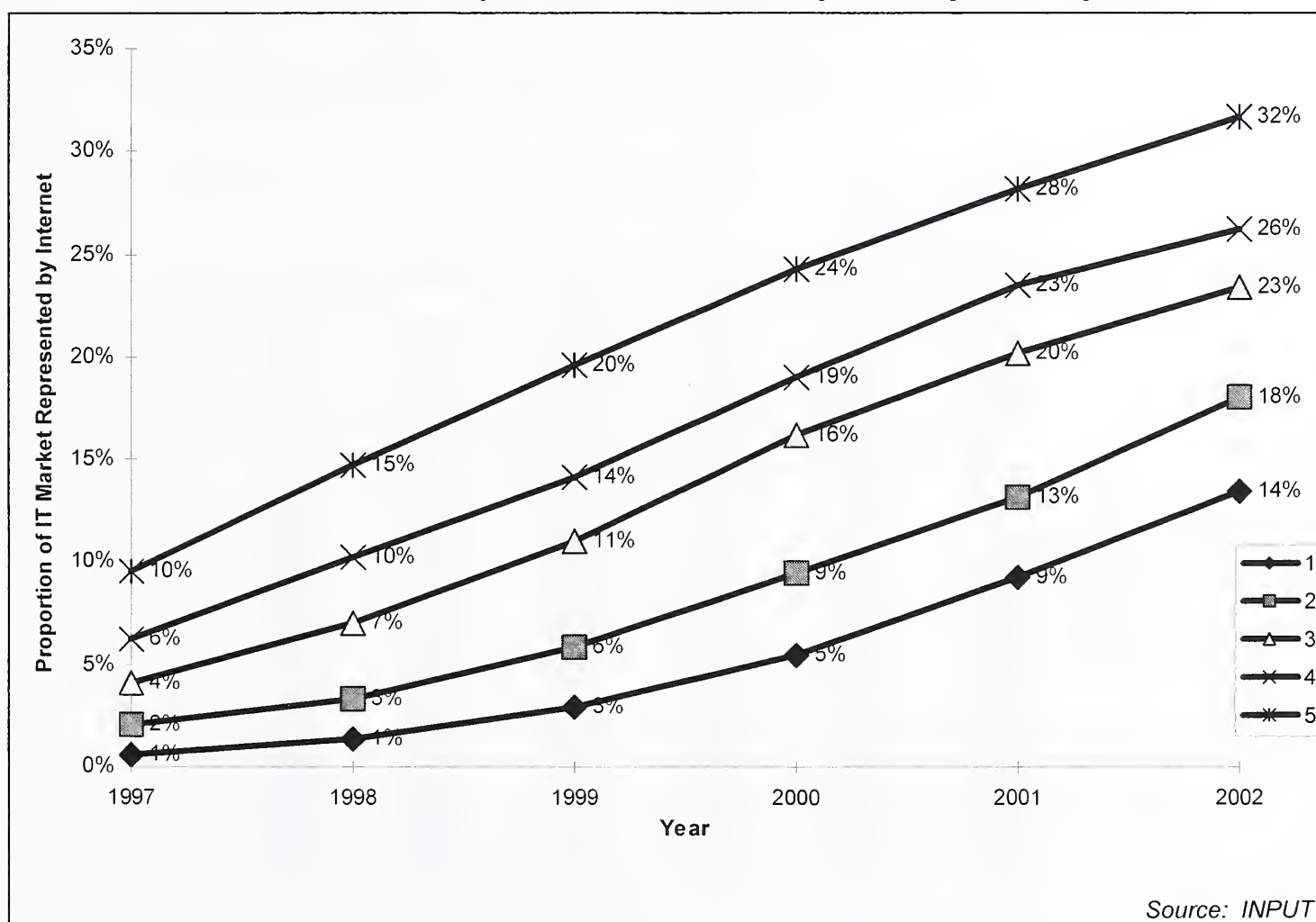
Source: INPUT

Included in the methodology for this report is a country-specific Internet market maturity index: a way of categorizing countries by their relative level of advancement in the Internet and Intranet market. Five levels of relative maturity are defined, and a country's assigned maturity index is a contributory factor in its market sizing.

Exhibit IV-10 shows, for each maturity level, the proportion of an overall country-level IT software and services market that is related to Internet or Intranet expenditure.

Exhibit IV-10

Internet Market as Proportion of IT Market: by Country Maturity Index



A maturity index of one signifies very low Internet market maturity compared with all other countries; an index of five signifies very high maturity. Examples include:

- China is assigned an index of one for 1997, rising to two by 2002; its relative position within the Internet markets of all other countries will strengthen over the period 1997 to 2002.
- The US is assigned an index of five for 1997 and five for 2002; it is currently very advanced in the Internet market compared with all other countries, and will remain so between 1997 and 2002.

Exhibit IV-10 shows that:

- Of China's IT software and services market in 1997, 1% (rounded) is related to Internet and Intranet; this will rise to 14% in 2002.
- Of the US' IT software and services market in 1997, 10% (rounded) is related to Internet and Intranet; this will rise to 32% in 2002.

The change in Internet/Intranet representation within overall IT markets is as expected:

- Very advanced countries show the rate of growth of Internet expenditure within IT markets beginning to flatten towards 2002.
- Very unadvanced countries show a lag in Internet market growth, with growth still increasing strongly in 2002. That growth will flatten in later years, beyond the scope of this report.

C

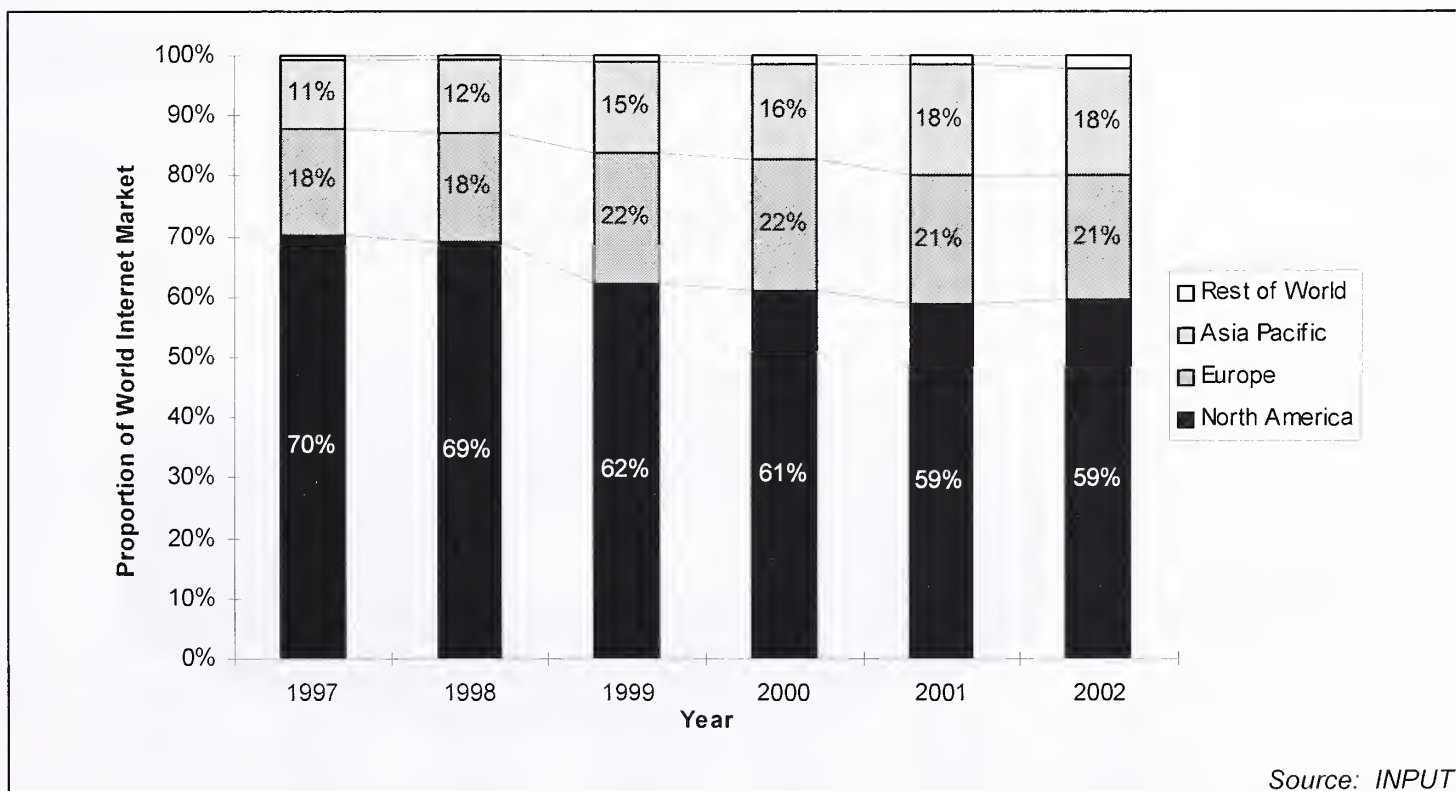
Proportions of World Internet/Intranet Market by Region

Exhibit IV-11 shows what proportion of the worldwide Internet/Intranet market each region will contribute from 1997 to 2002. The two major changes are:

- North America (almost all of which is accounted for by the US) will represent a decreasing proportion of the worldwide Internet market, from 70% currently to 59% in 2002.
- Asia-Pacific will fill most of the gap left by North America's decreasing share and will begin to approach Europe's share of the worldwide Internet market by 2002.

Exhibit IV-11

Regional Breakdown of Worldwide Internet Market



Exhibits IV-12 and IV-13 show the breakdown of the worldwide Internet market by region in more detail for 1997 and 2002 respectively.

Exhibit IV-12

Worldwide Internet Market, 1997

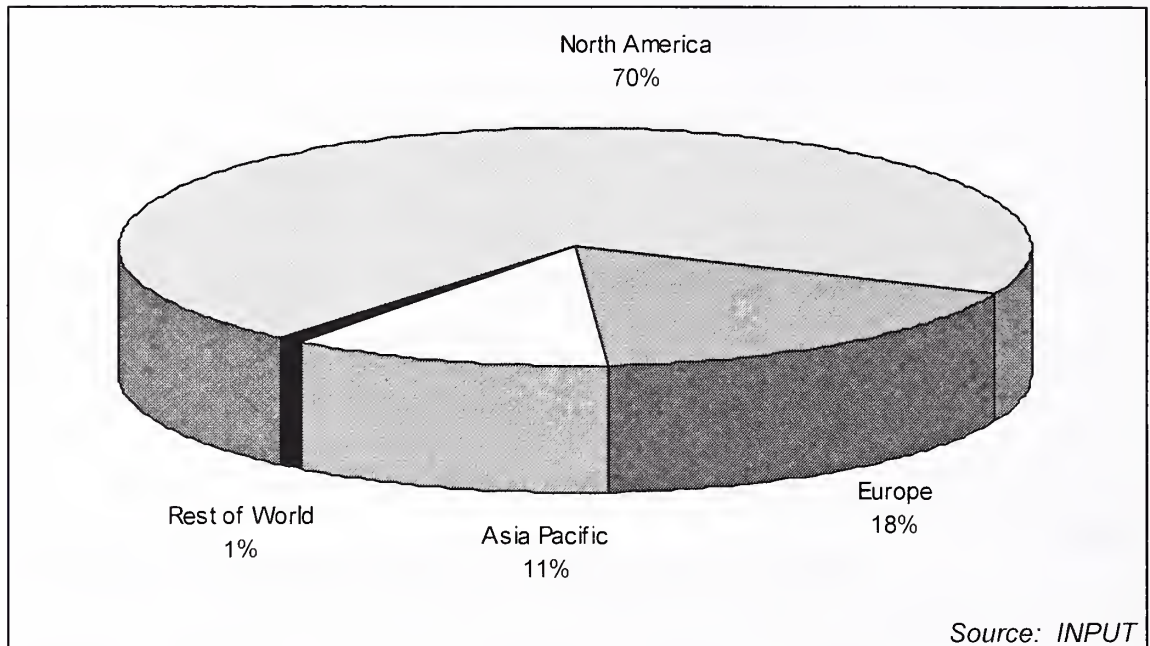
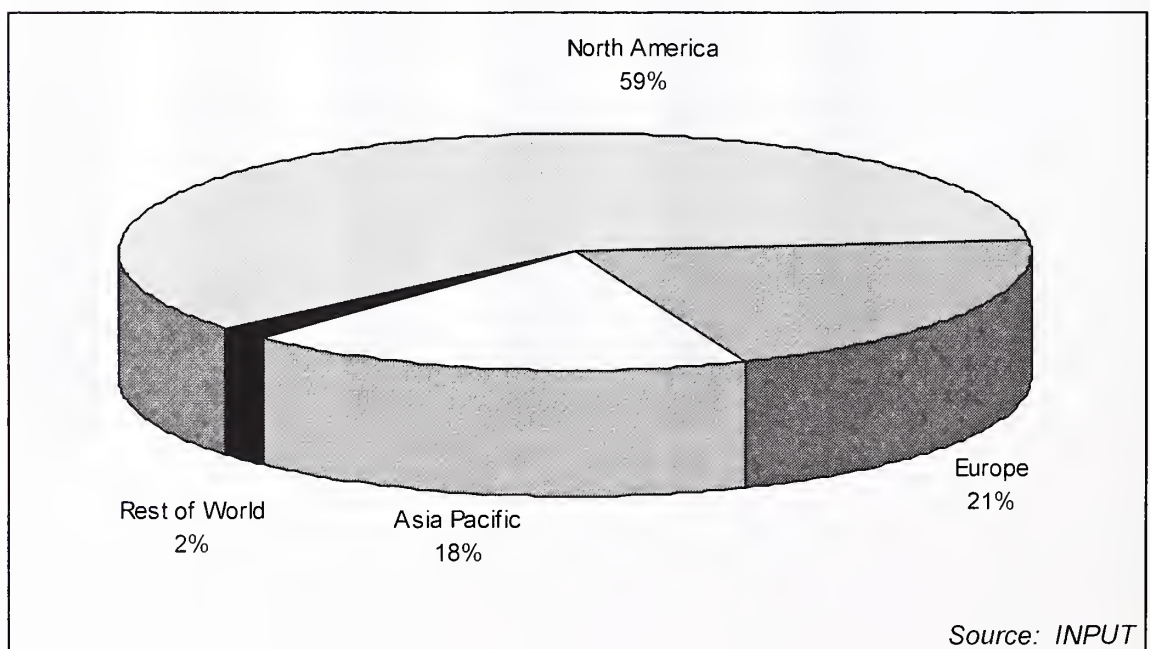


Exhibit IV-13

Worldwide Internet Market, 2002



Exhibits IV-14 to IV-18 show the proportion of the worldwide Internet market accounted for by each region individually from 1997 to 2002.

Exhibit IV-14

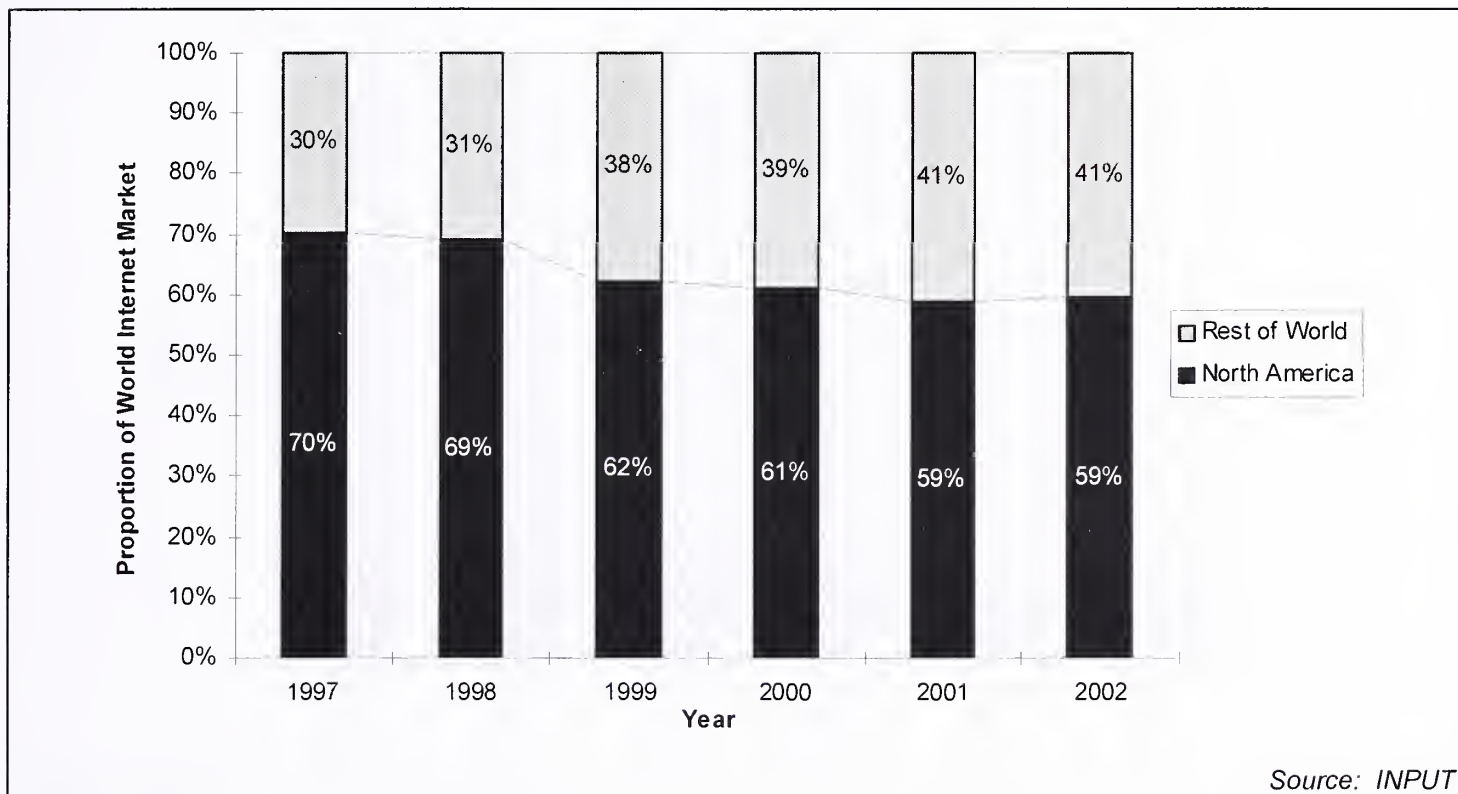
Proportion of Worldwide Internet Market: North America

Exhibit IV-15

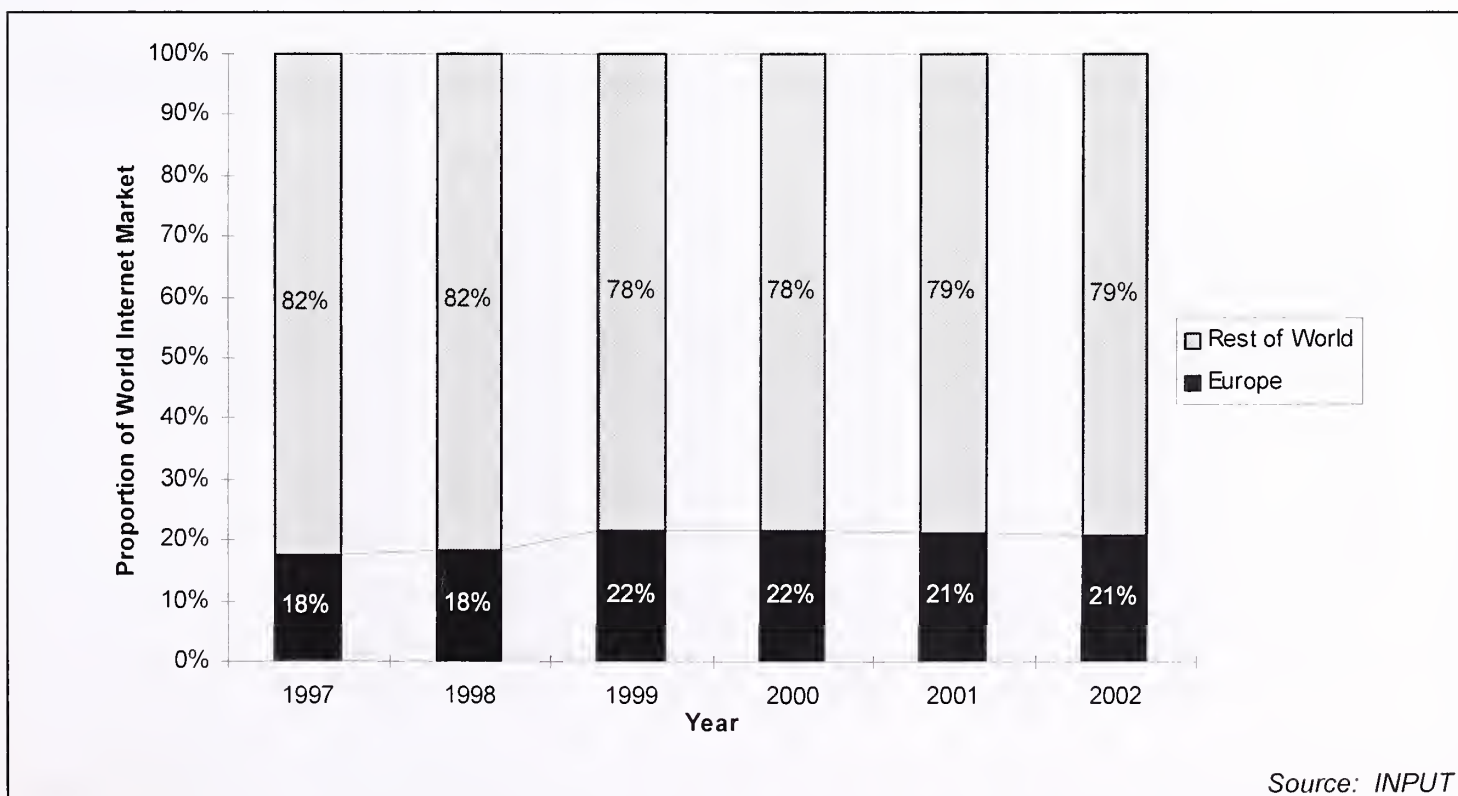
Proportion of Worldwide Internet Market: Europe

Exhibit IV-16

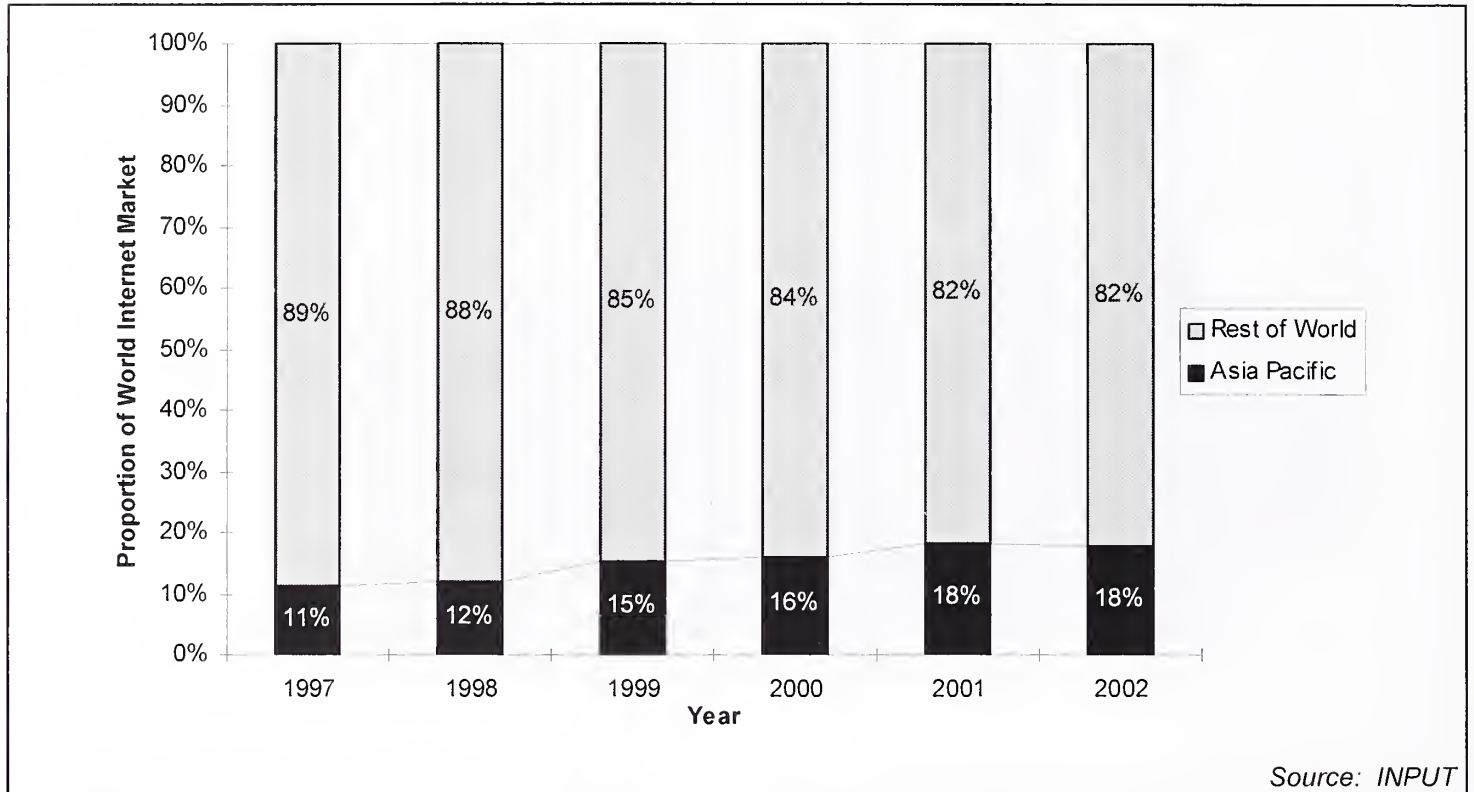
Proportion of Worldwide Internet Market: Asia-Pacific

Exhibit IV-17

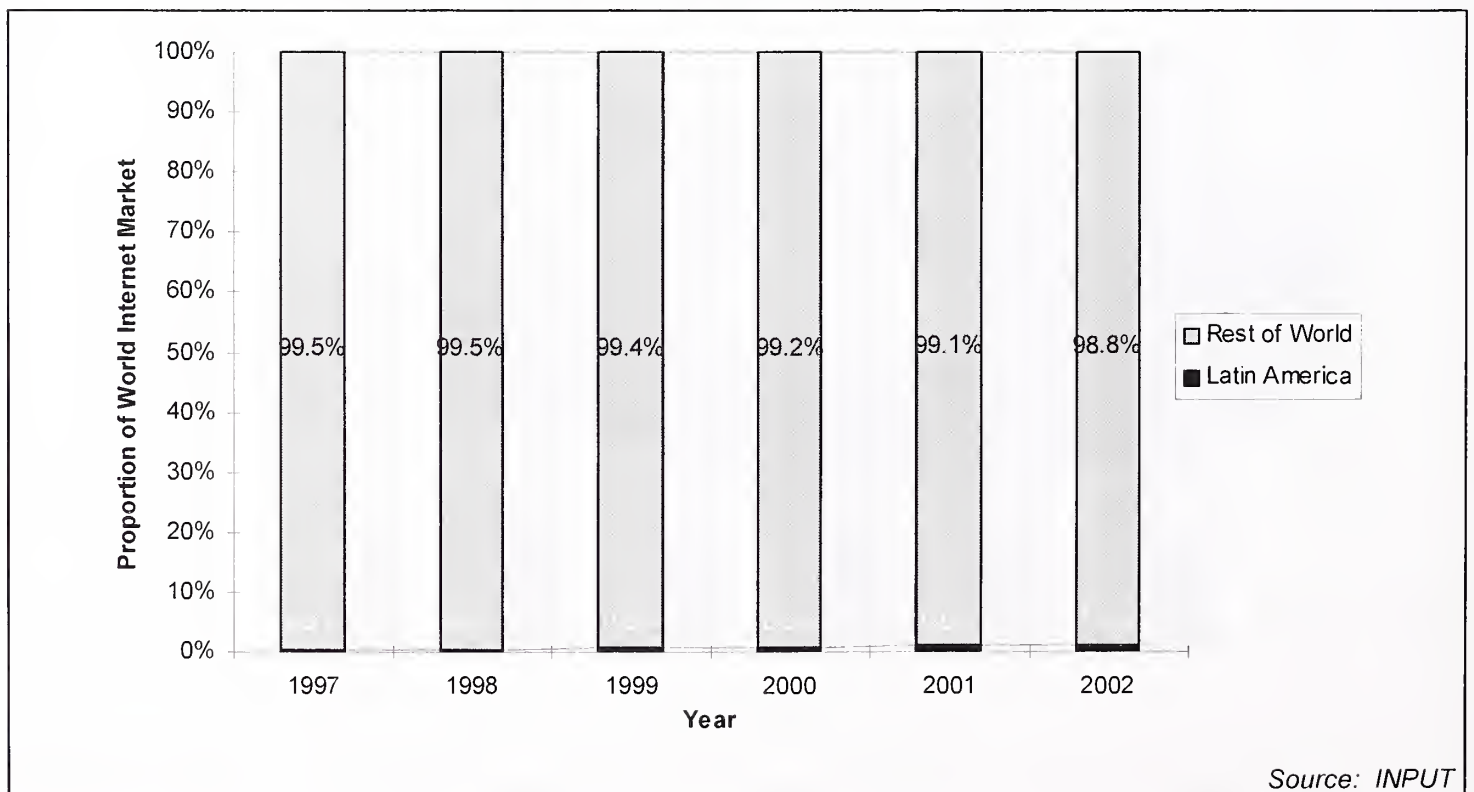
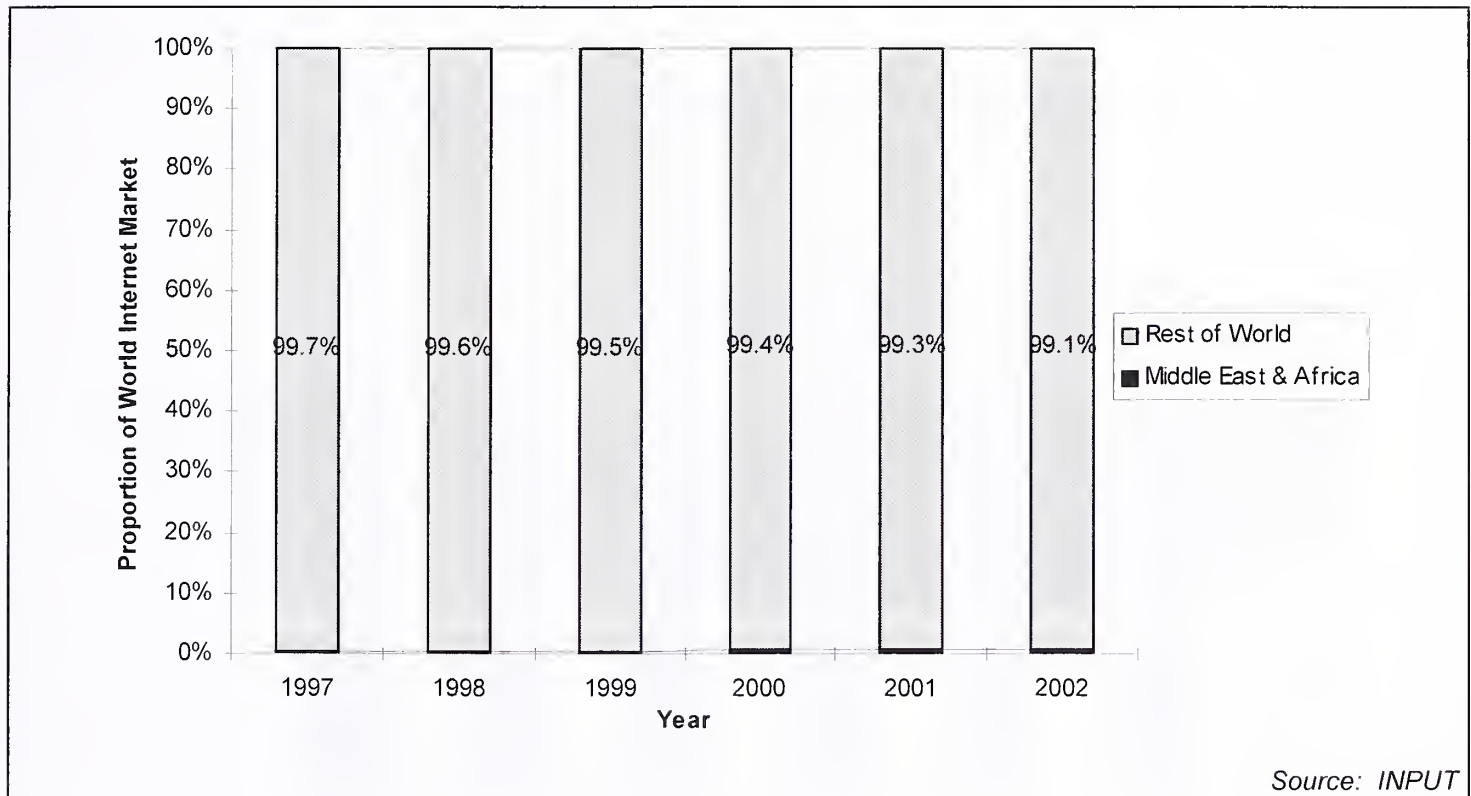
Proportion of Worldwide Internet Market: Latin America

Exhibit IV-18

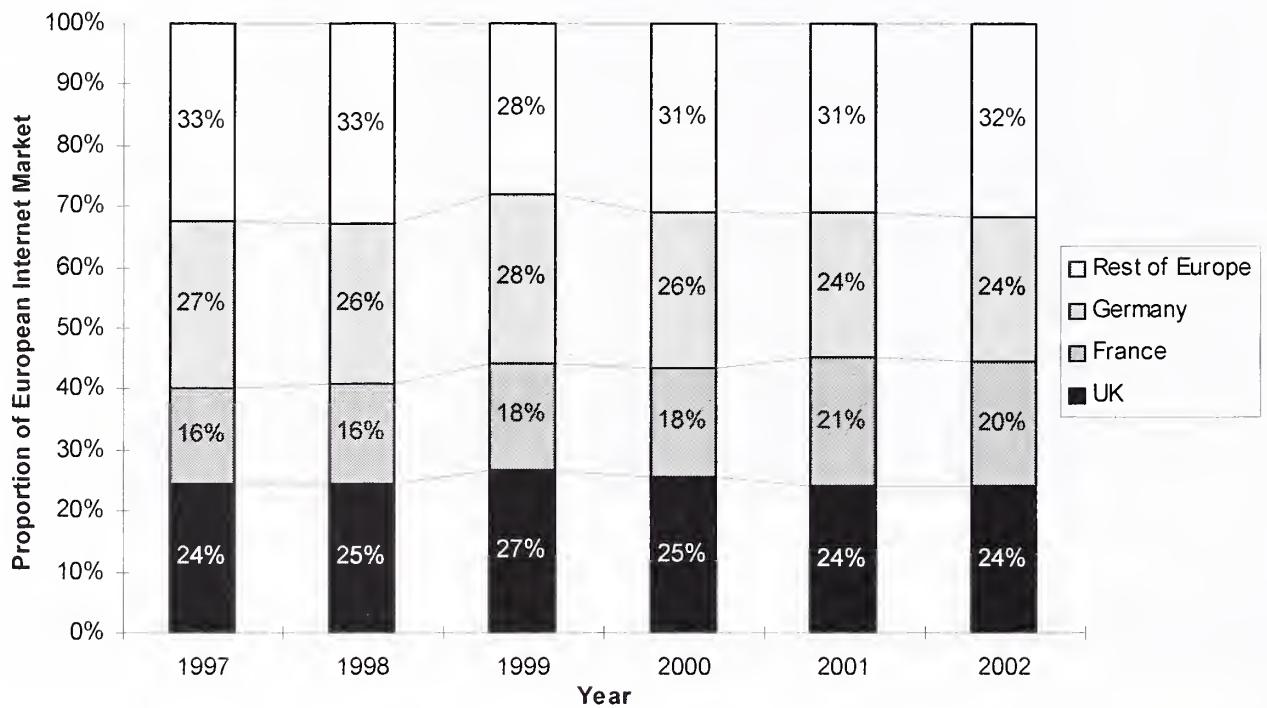
Proportion of Worldwide Internet Market: Middle East & Africa**D****Proportions of Regional Internet/Intranet Markets by Country****1. Europe**

The European Internet market is unusual in that the proportional breakdown of the major countries does not change greatly between 1997 and 2002. Similarly, Europe's proportion of the worldwide Internet market does not change greatly over the same period.

Exhibit IV-19 shows a country breakdown of the European Internet market from 1997 to 2002.

Exhibit IV-19

Country Breakdown of European Internet Market



Source: INPUT

Exhibits IV-20 and IV-21 show the breakdown of the European Internet market by major country for 1997 and 2002 respectively.

Exhibit IV-20

European Internet Market, 1997

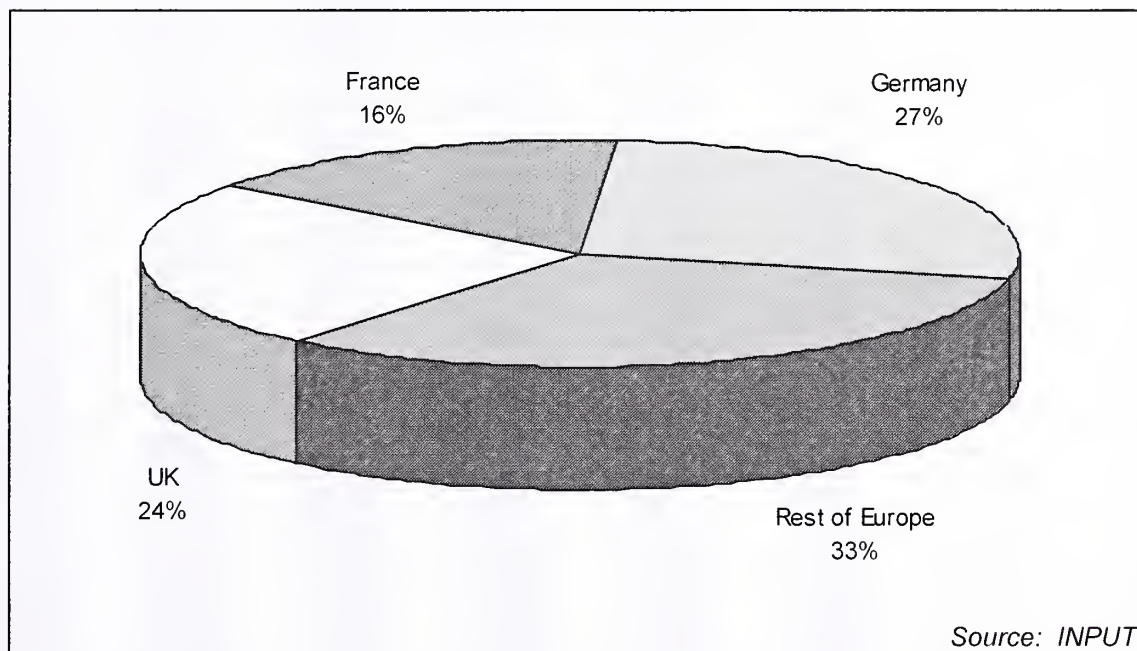
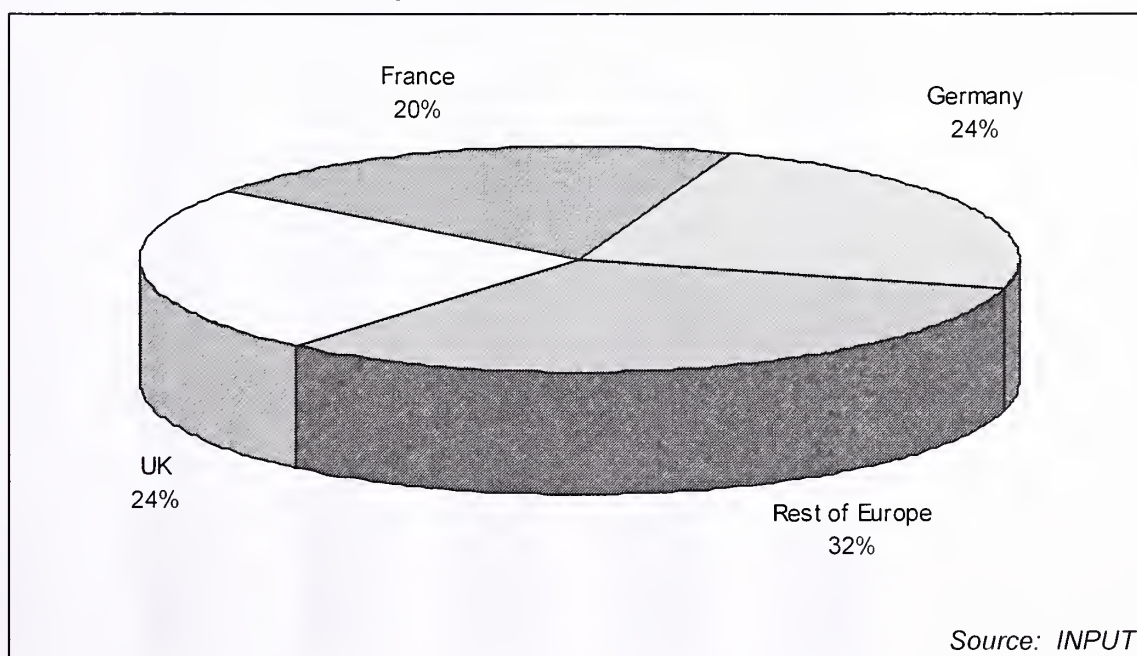


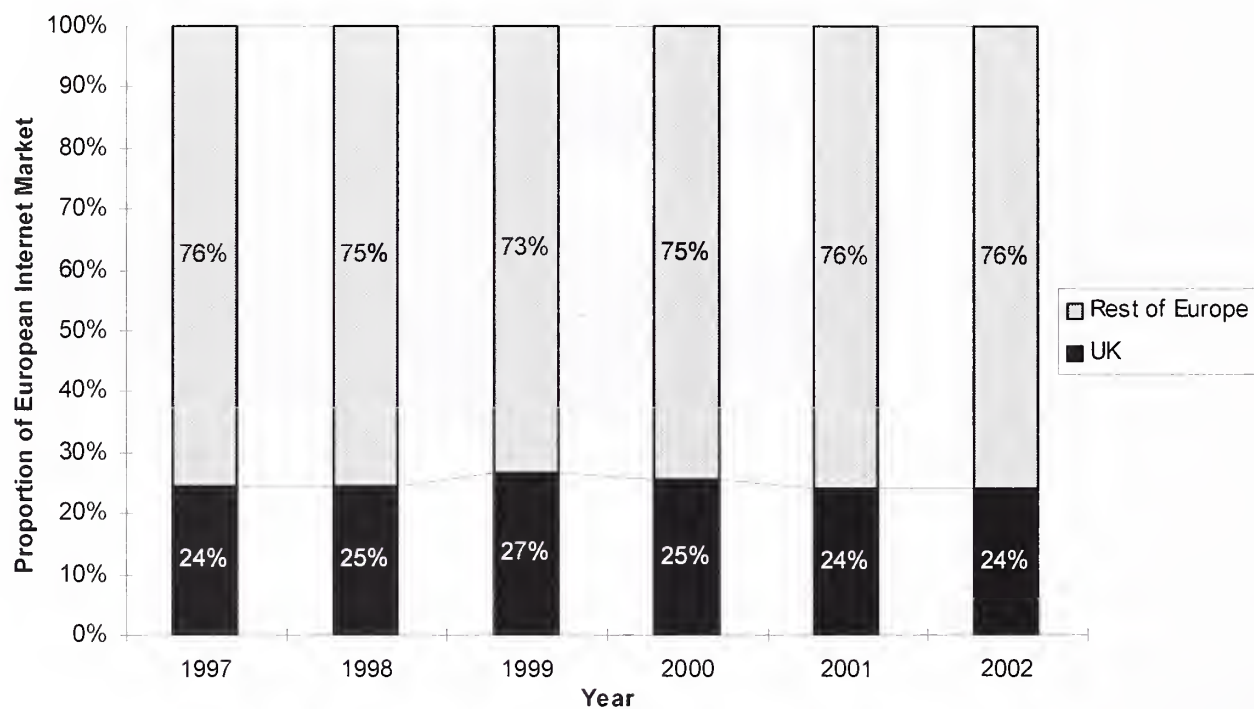
Exhibit IV-21

European Internet Market, 2002



Exhibits IV-22 to IV-24 show the proportion of the European Internet market accounted for by each major country individually from 1997 to 2002.

Exhibit IV-22

Proportion of European Internet Market: UK

Source: INPUT

Exhibit IV-23

Proportion of European Internet Market: France

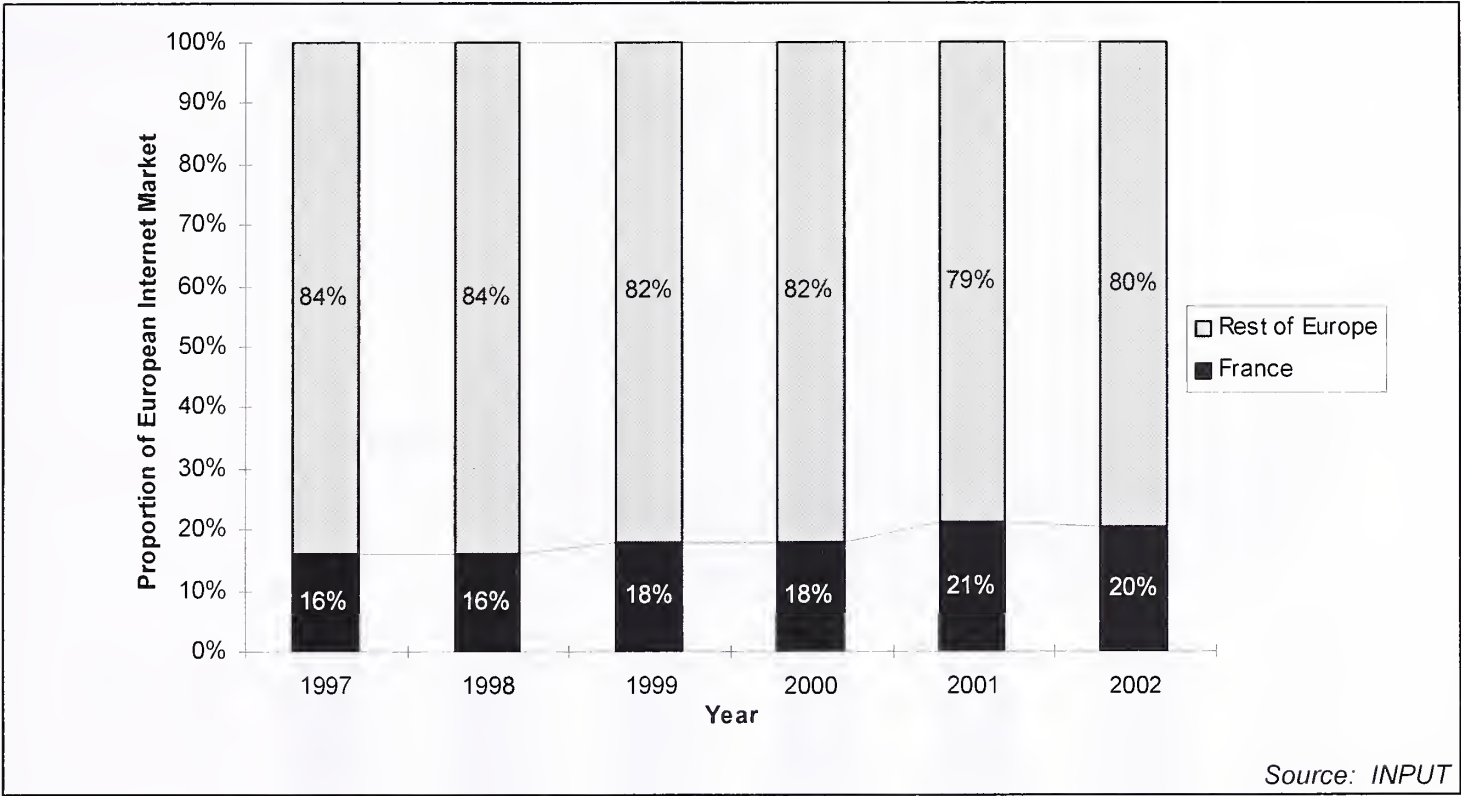
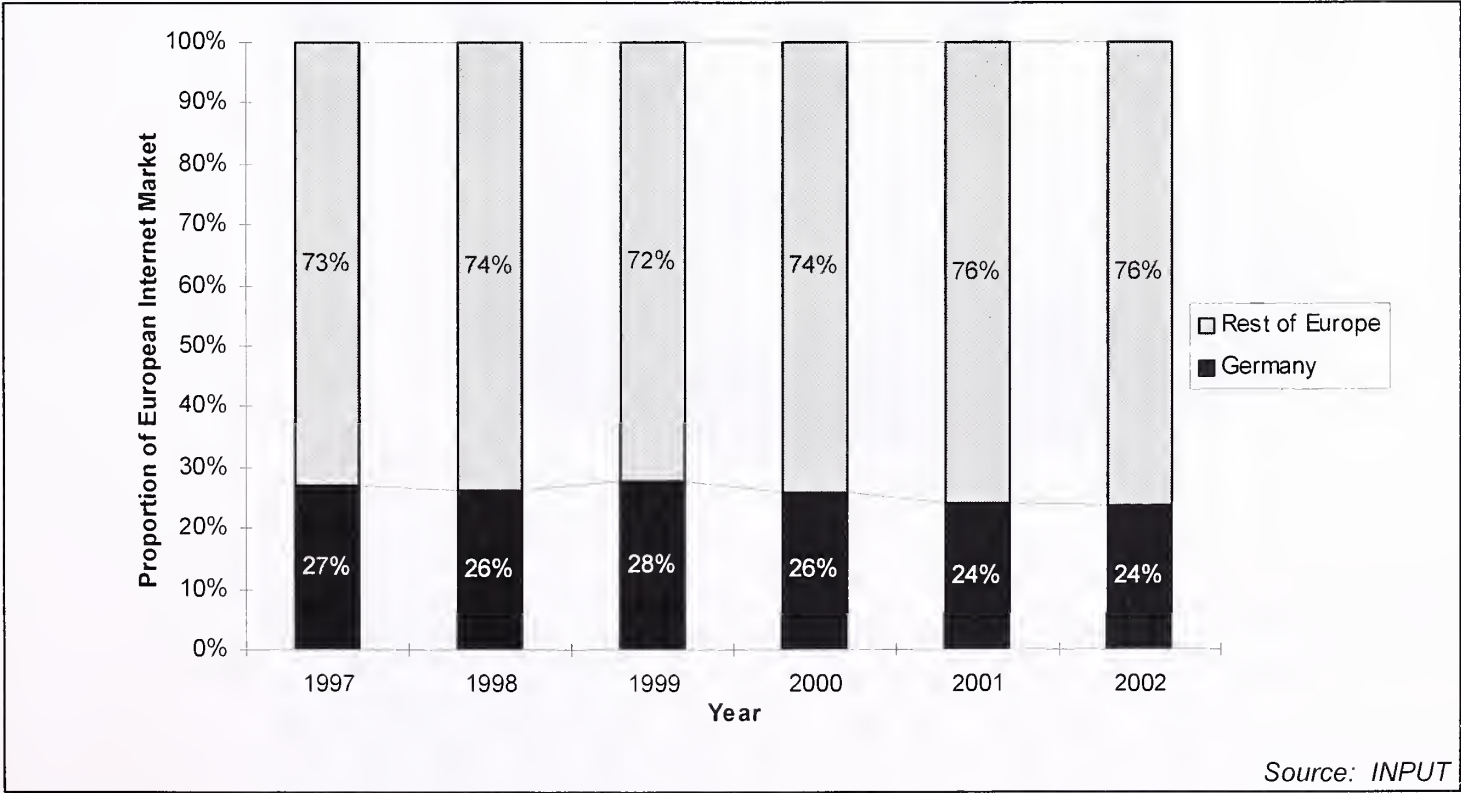


Exhibit IV-24

Proportion of European Internet Market: Germany



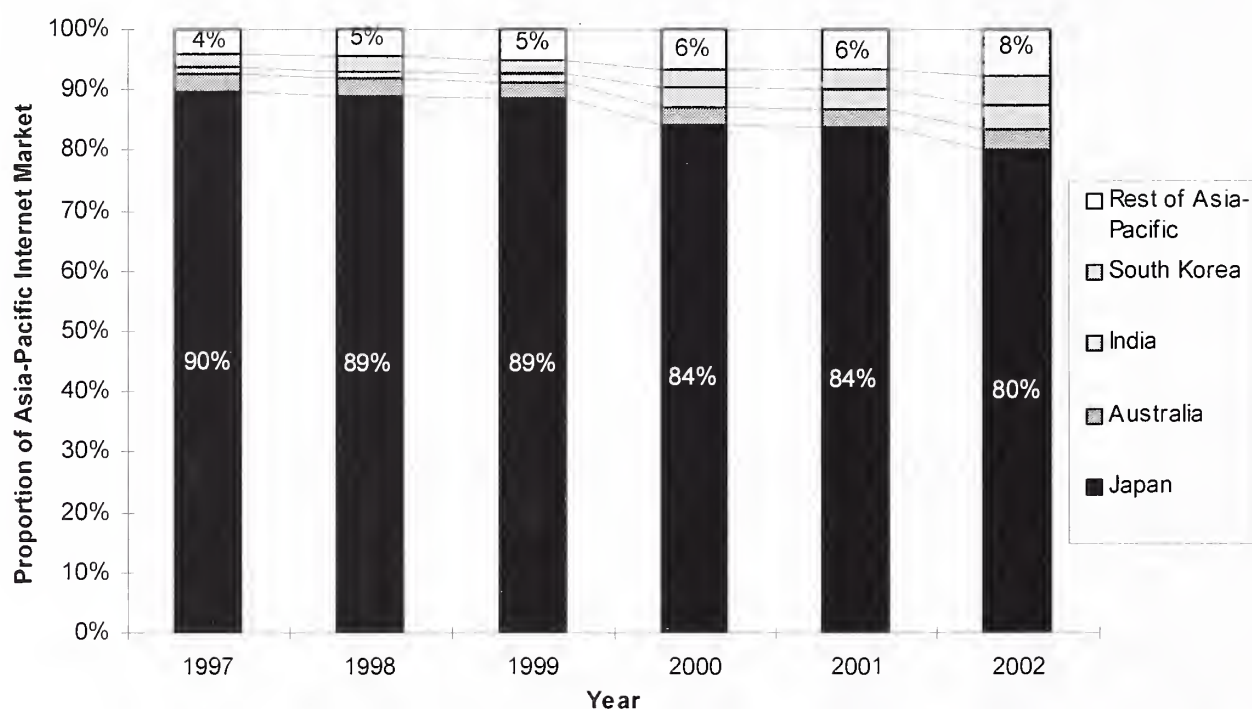
2. Asia-Pacific

Exhibit IV-25 shows a country breakdown of the Asia-Pacific Internet market from 1997 to 2002.

Japan's relative share of the Asia-Pacific market will decline over this period (as it will in the overall market for IT software and services) due to rapidly increasing activity in the 'tiger economies' of South East Asia (notwithstanding their potential economic difficulties over the next five years) and the Indian subcontinent.

Exhibit IV-25

Country Breakdown of Asia-Pacific Internet Market



Source: INPUT

Exhibits IV-26 and IV-27 show the breakdown of the Asia-Pacific Internet market by major country for 1997 and 2002 respectively.

Exhibit IV-26

Asia-Pacific Internet Market, 1997

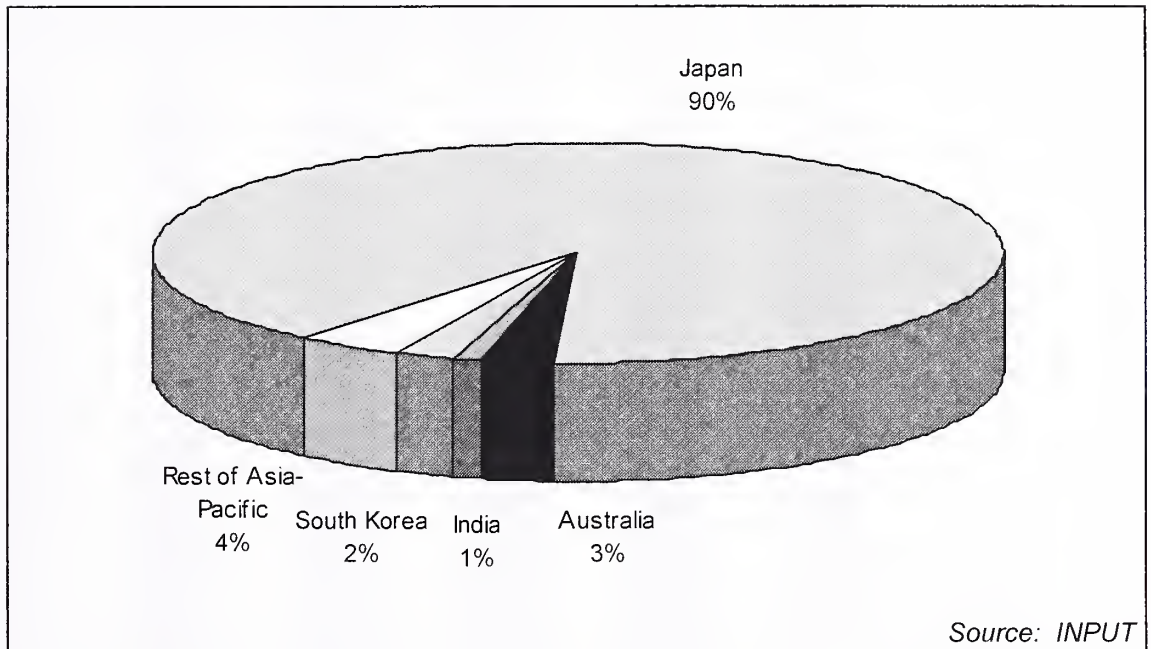
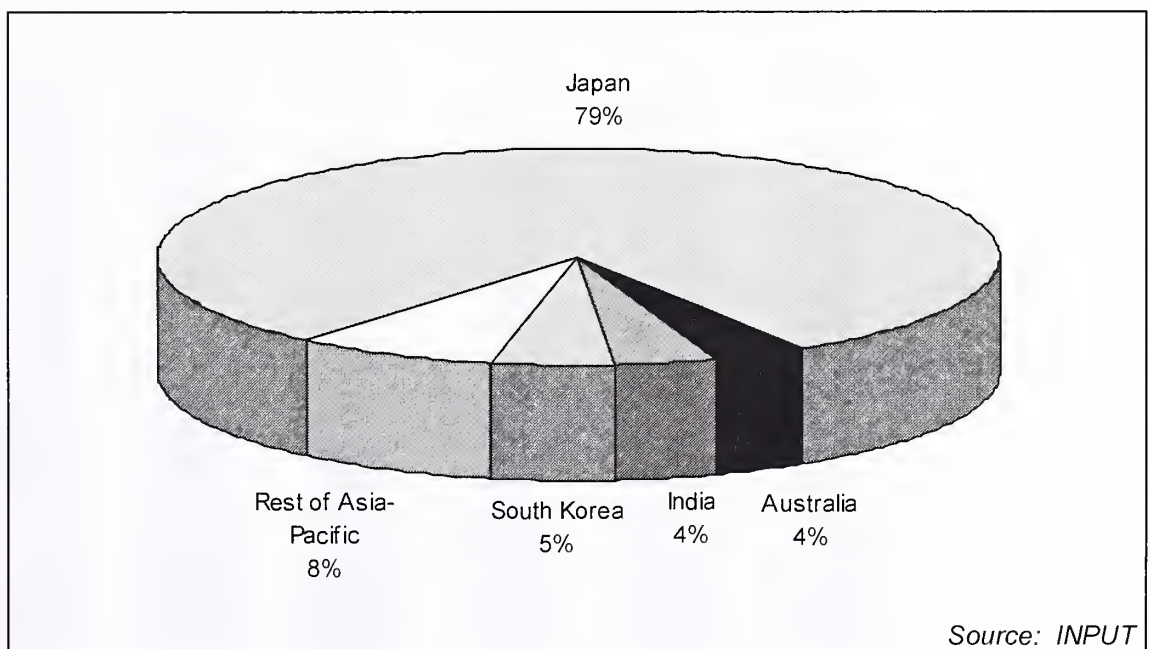


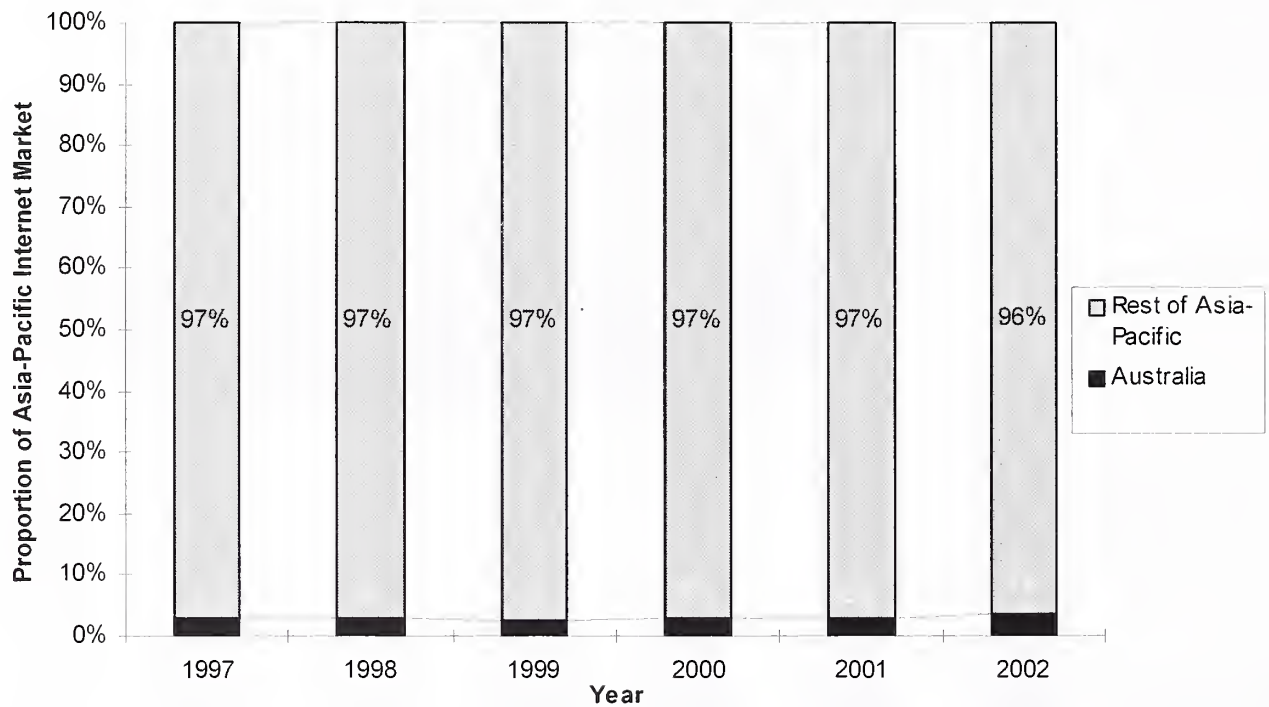
Exhibit IV-27

Asia-Pacific Internet Market, 2002



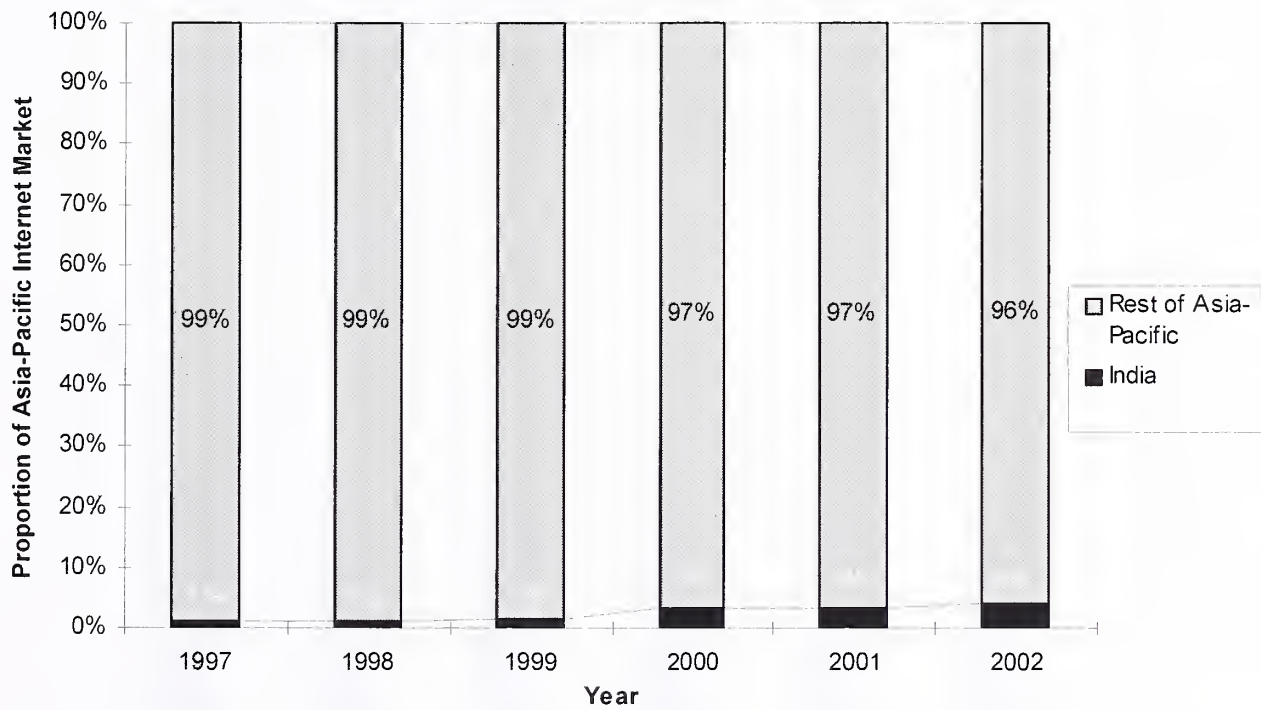
Exhibits IV-28 to IV-31 show the proportion of the Asia-Pacific Internet market accounted for by each major country individually from 1997 to 2002.

Exhibit IV-28

Proportion of Asia-Pacific Internet Market: Australia

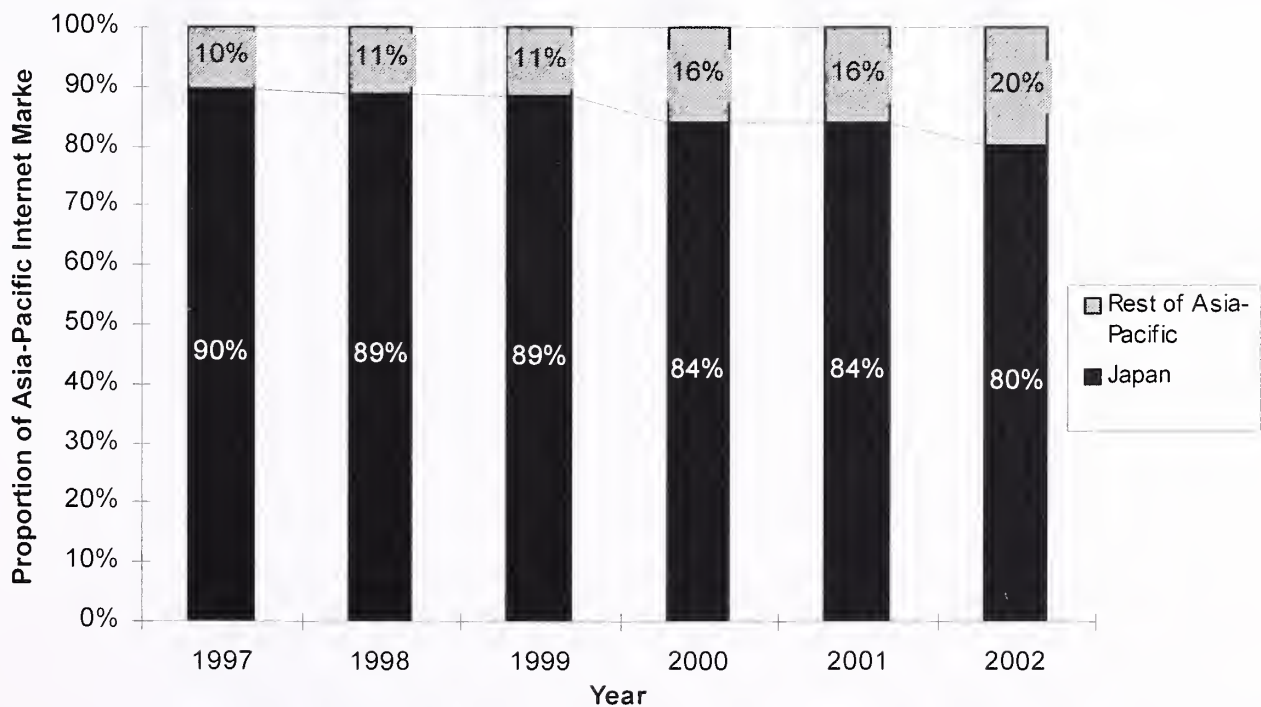
Source: INPUT

Exhibit IV-29

Proportion of Asia-Pacific Internet Market: India

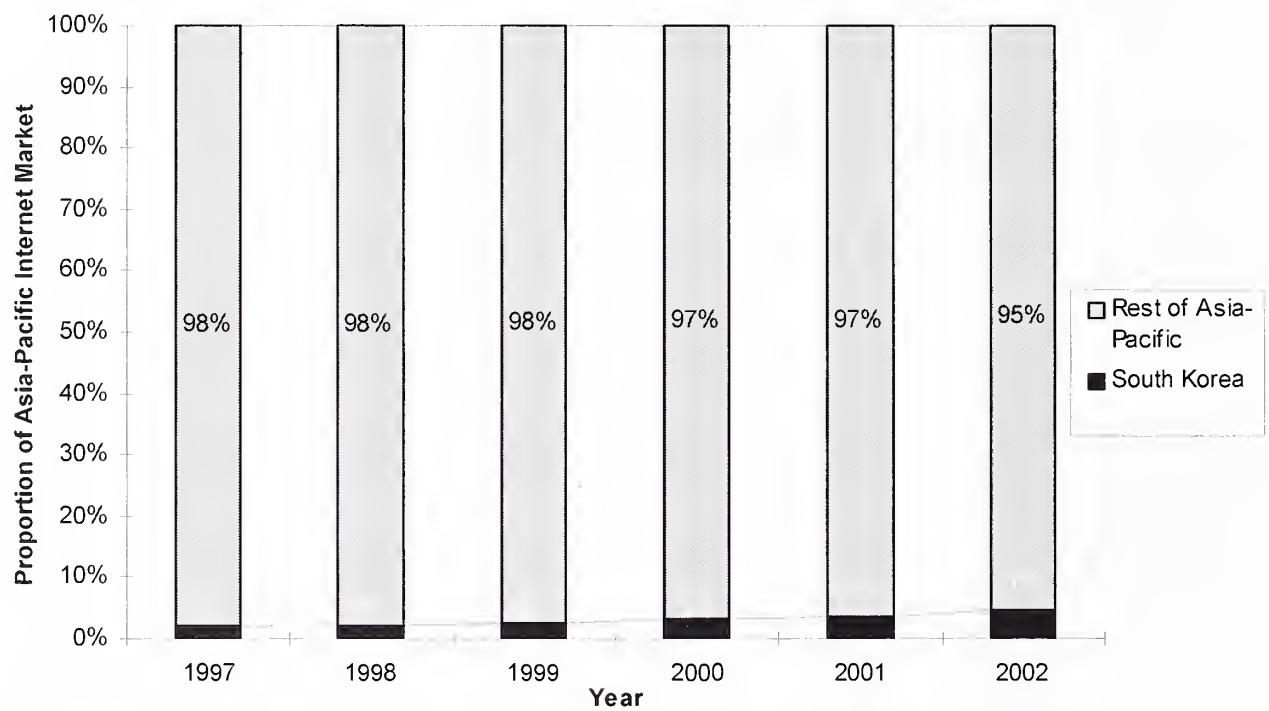
Source: INPUT

Exhibit IV-30

Proportion of Asia-Pacific Internet Market: Japan

Source: INPUT

Exhibit IV-31

Proportion of Asia-Pacific Internet Market: South Korea

Source: INPUT

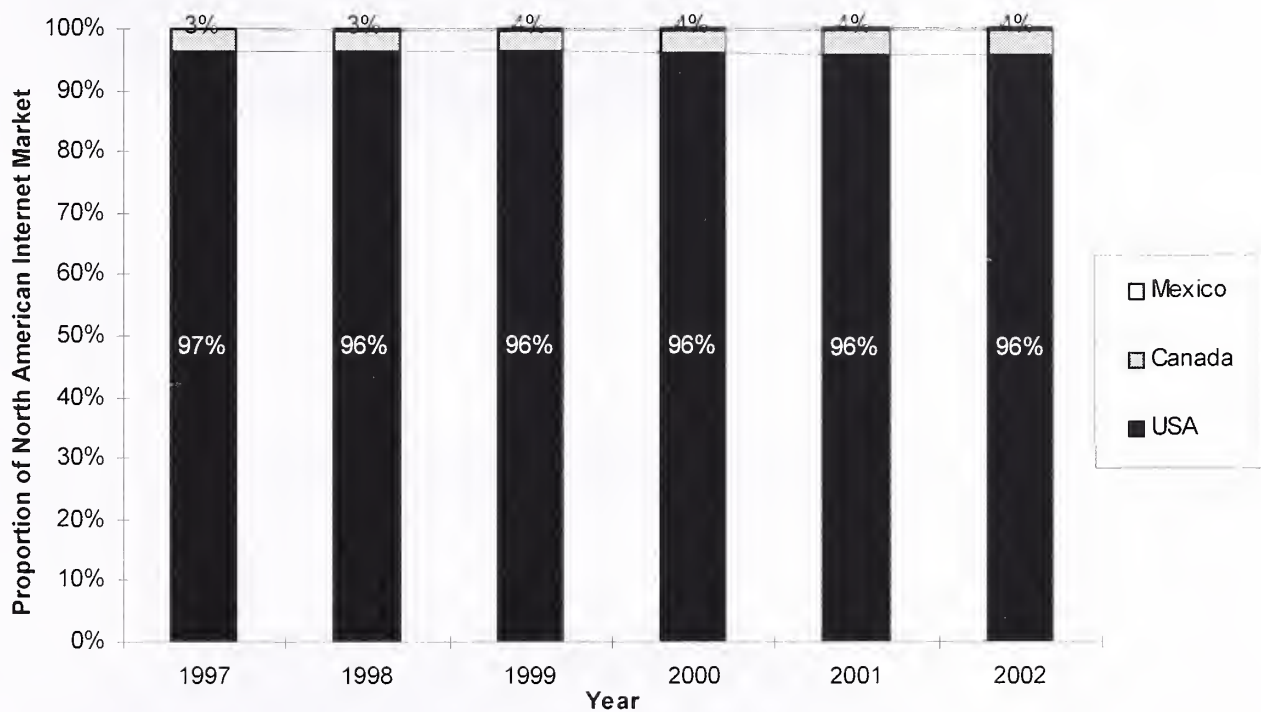
3. North America

Exhibit IV-32 shows a country breakdown of the North American Internet market from 1997 to 2002.

The North American Internet market is of course dominated by the US. So dominant is the US, its relative share of the Internet market will not change markedly between 1997 and 2002.

Exhibit IV-32

Country Breakdown of North American Internet Market



Source: INPUT

Exhibits IV-33 and IV-34 show the breakdown of the North American Internet market by country for 1997 and 2002 respectively.

Exhibit IV-33

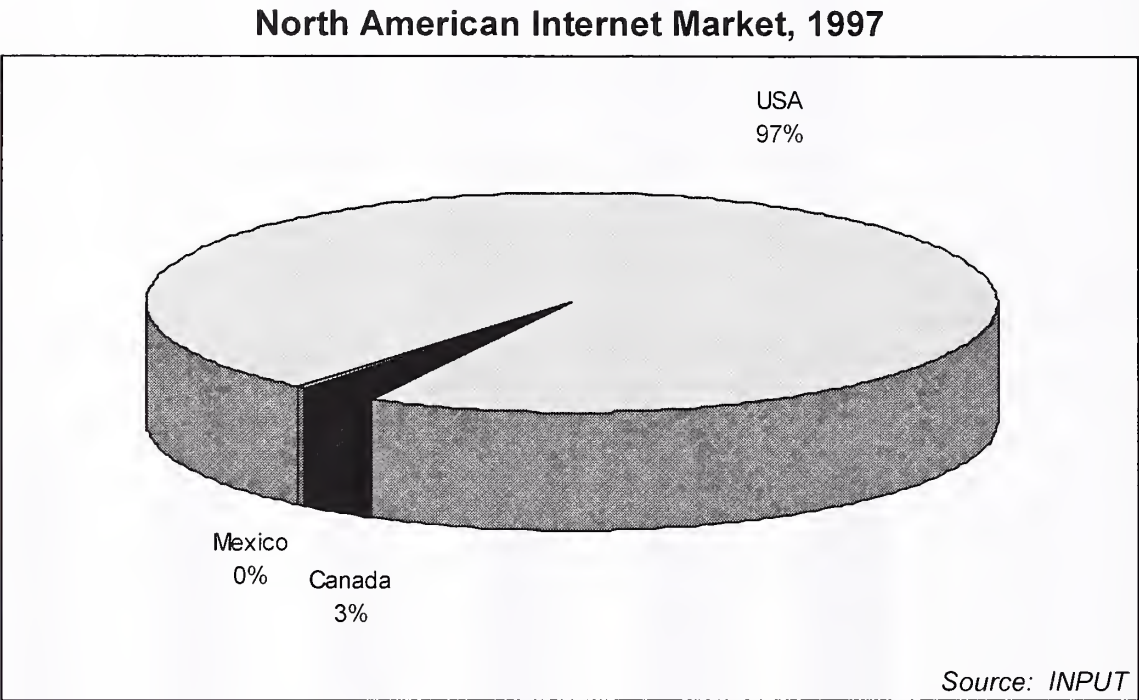
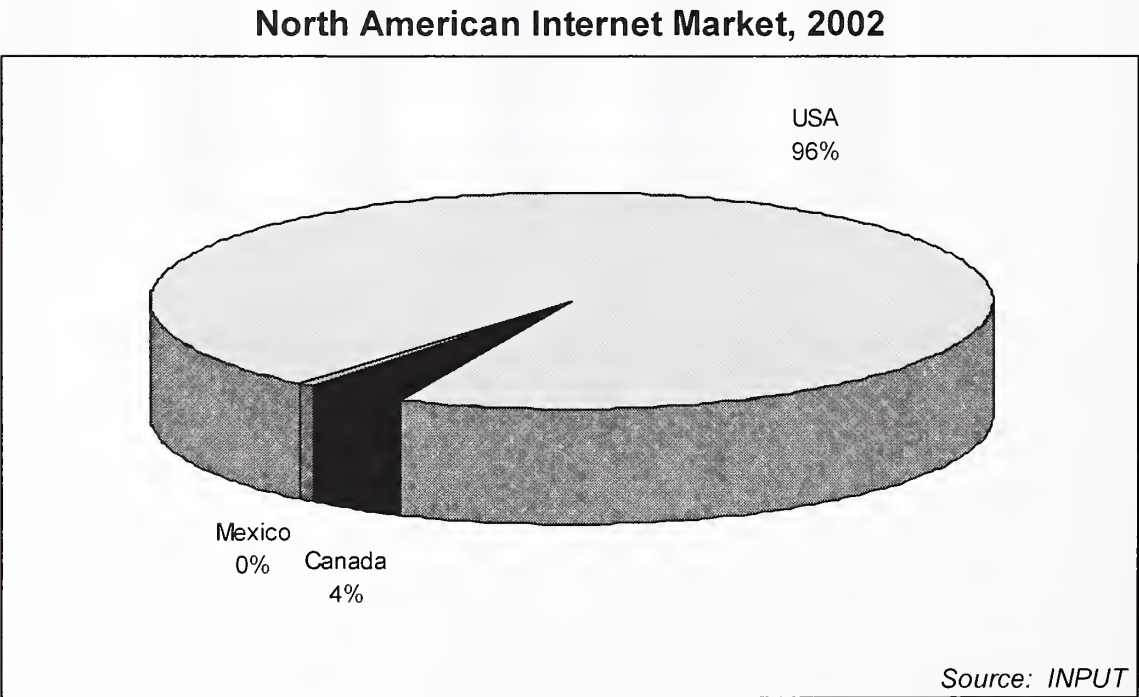


Exhibit IV-34



Exhibits IV-35 to IV-37 show the proportion of the North American Internet market accounted for by each country individually from 1997 to 2002.

Exhibit IV-35

Proportion of North American Internet Market: USA

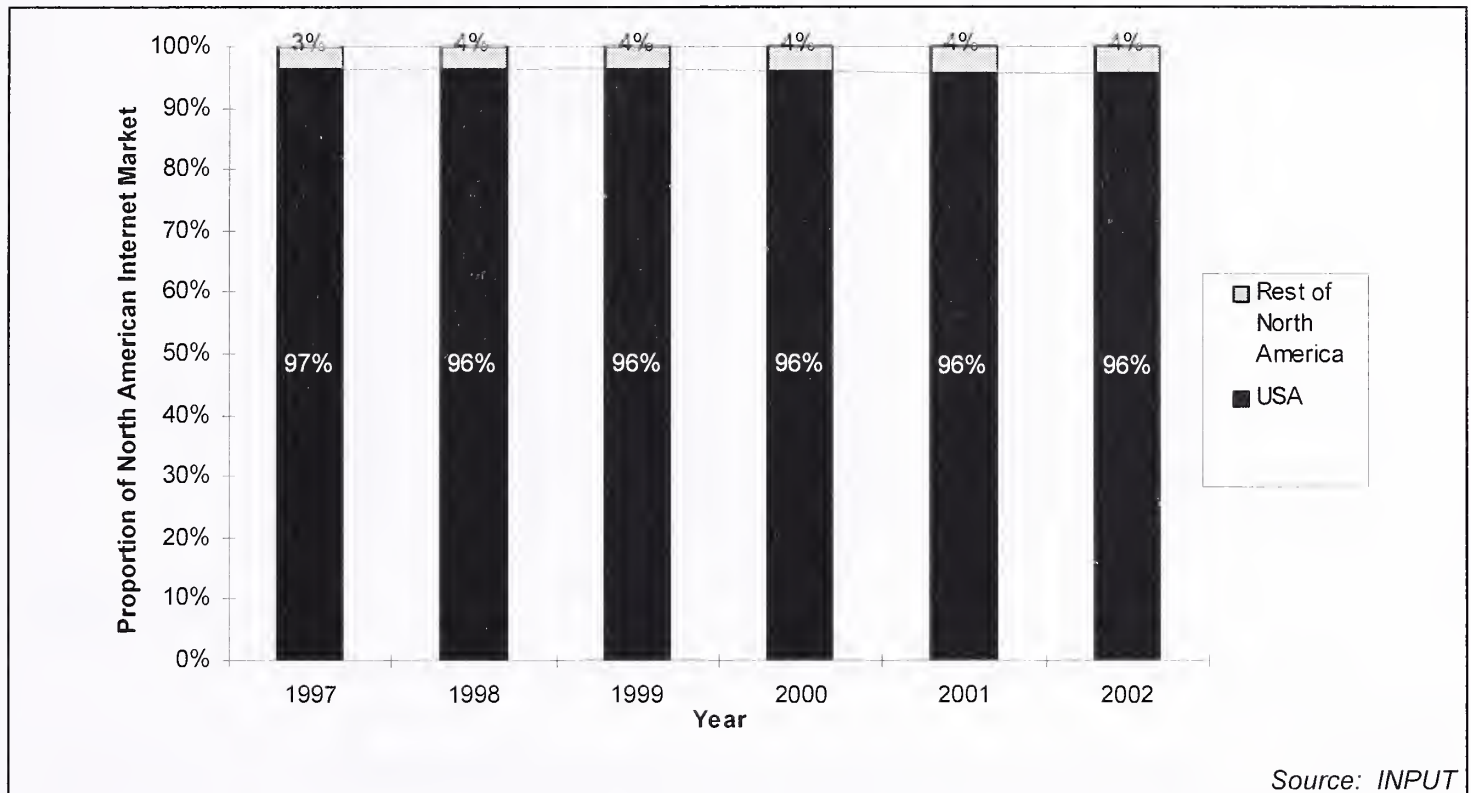


Exhibit IV-36

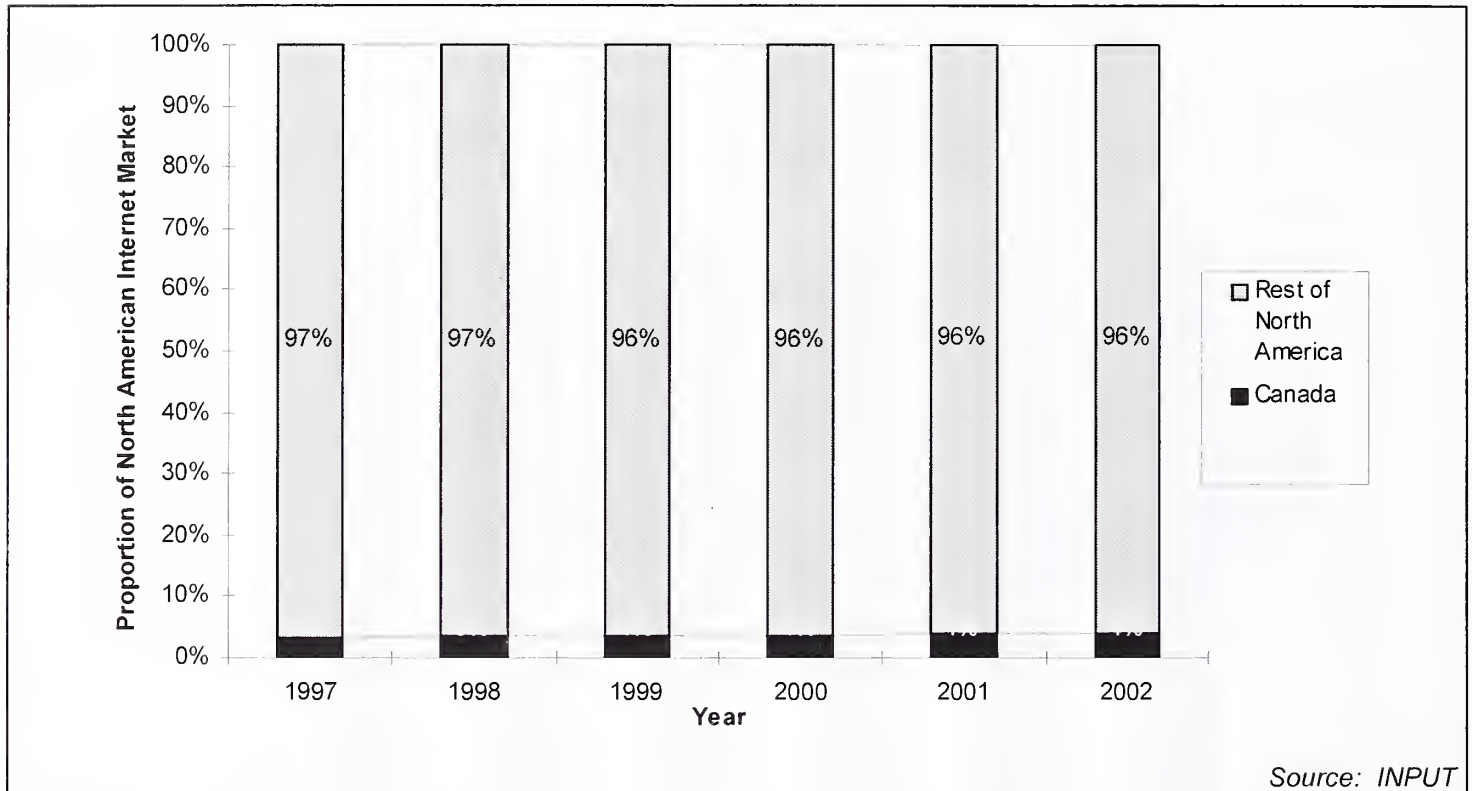
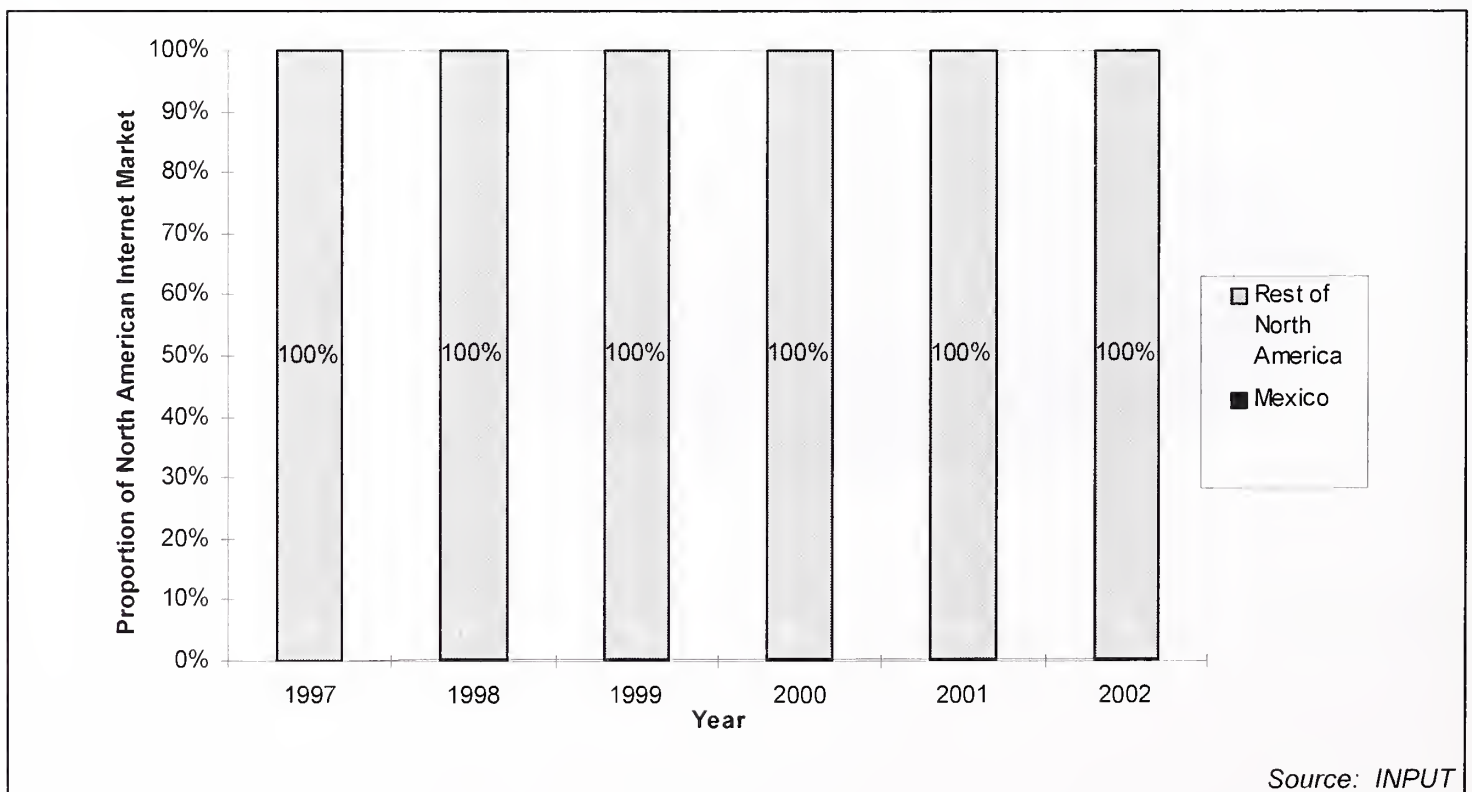
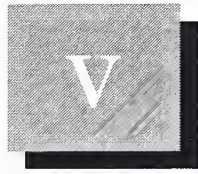
Proportion of North American Internet Market: Canada

Exhibit IV-37

Proportion of North American Internet Market: Mexico



Worldwide and Regional Internet Markets

A

Worldwide

Exhibit V-1 shows the worldwide market for all Internet and Intranet software and services, 1997 to 2002. The market will increase in value by 52% per year over this period.

Exhibit V-2 shows a breakdown of the worldwide market by delivery mode.

Exhibit V-1

Internet/Intranet Market, 1997-2002: Worldwide

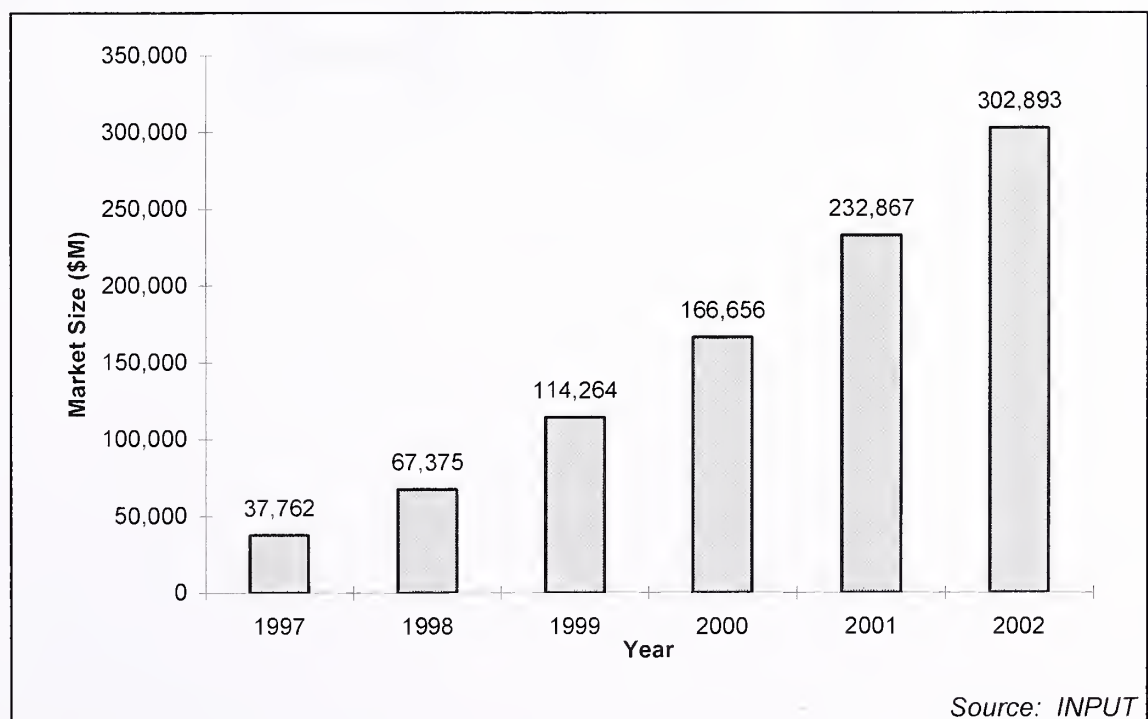
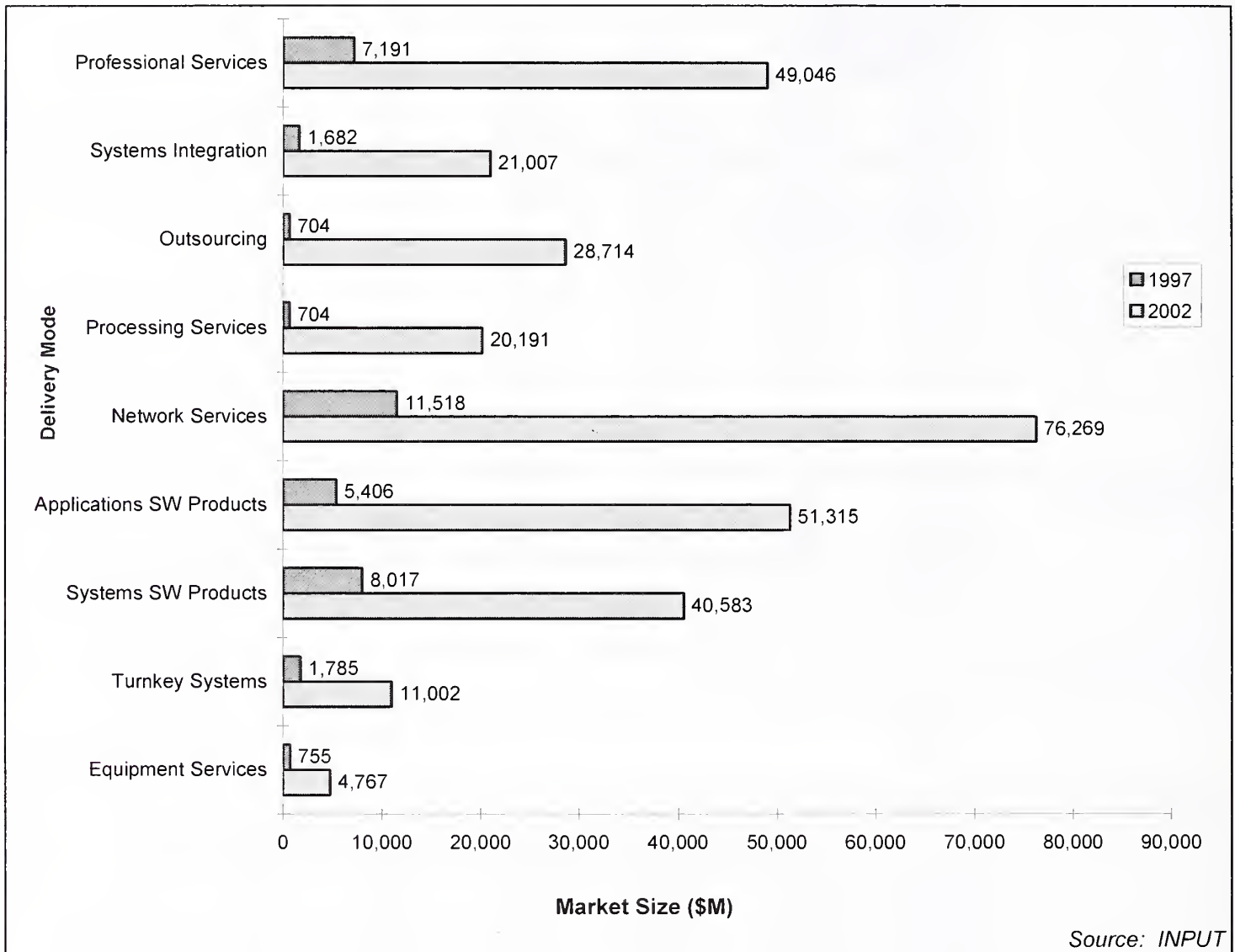


Exhibit V-2

Internet/Intranet Market by Delivery Mode, 1997-2002: Worldwide

B**North America**

Exhibit V-3 shows the North American market for all Internet and Intranet software and services, 1997 to 2002. The market will increase in value by 47% per year over this period.

Exhibit V-4 shows a breakdown of the North American market by delivery mode.

Exhibit V-3

Internet/Intranet Market, 1997-2002: North America

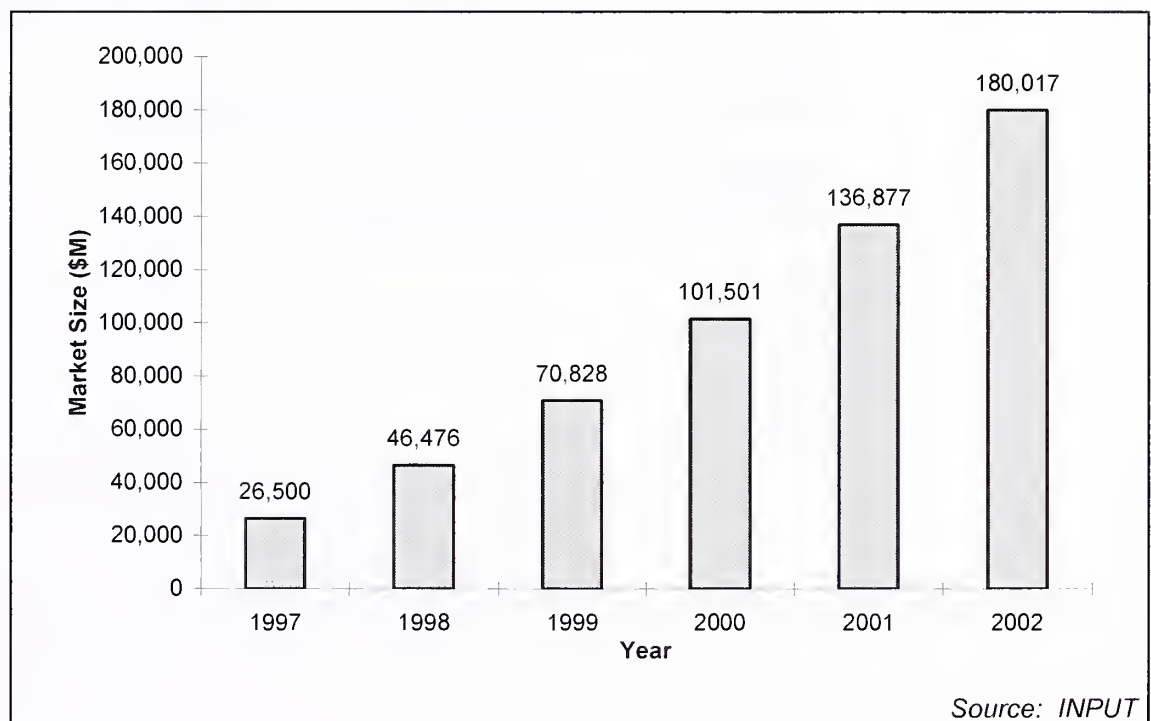
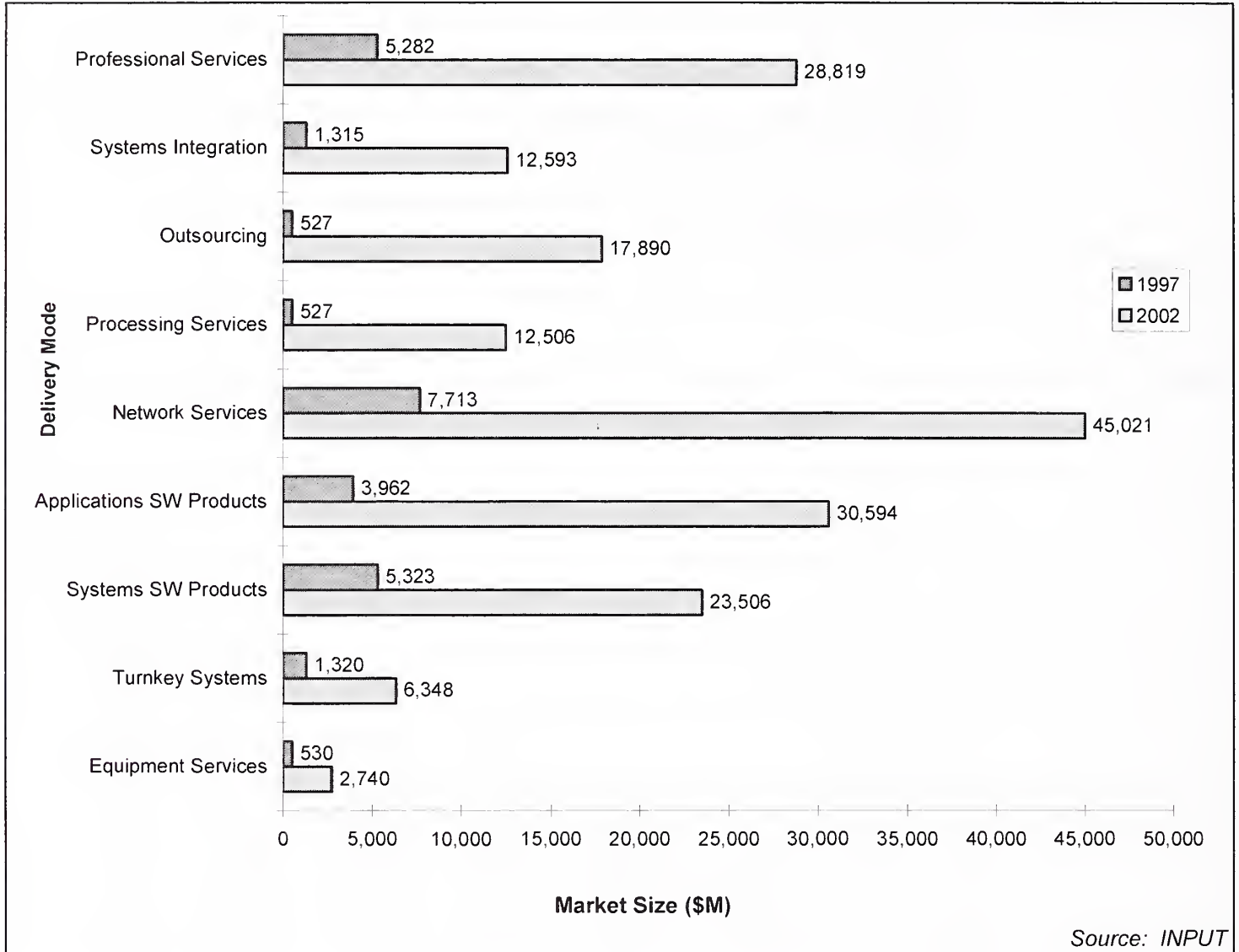


Exhibit V-4

Internet/Intranet Market by Delivery Mode, 1997-2002: North America

C**Europe**

Exhibit V-5 shows the European market for all Internet and Intranet software and services, 1997 to 2002. The market will increase in value by 57% per year over this period.

Exhibit V-6 shows a breakdown of the European market by delivery mode.

Exhibit V-5

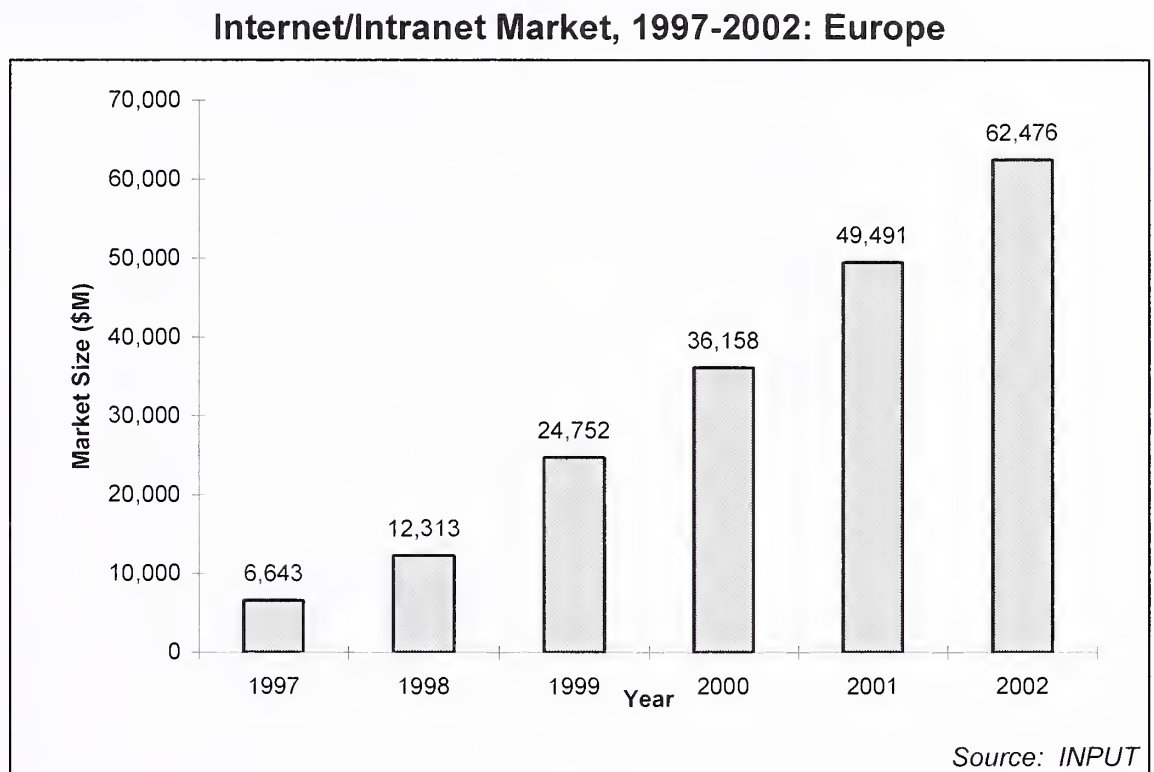
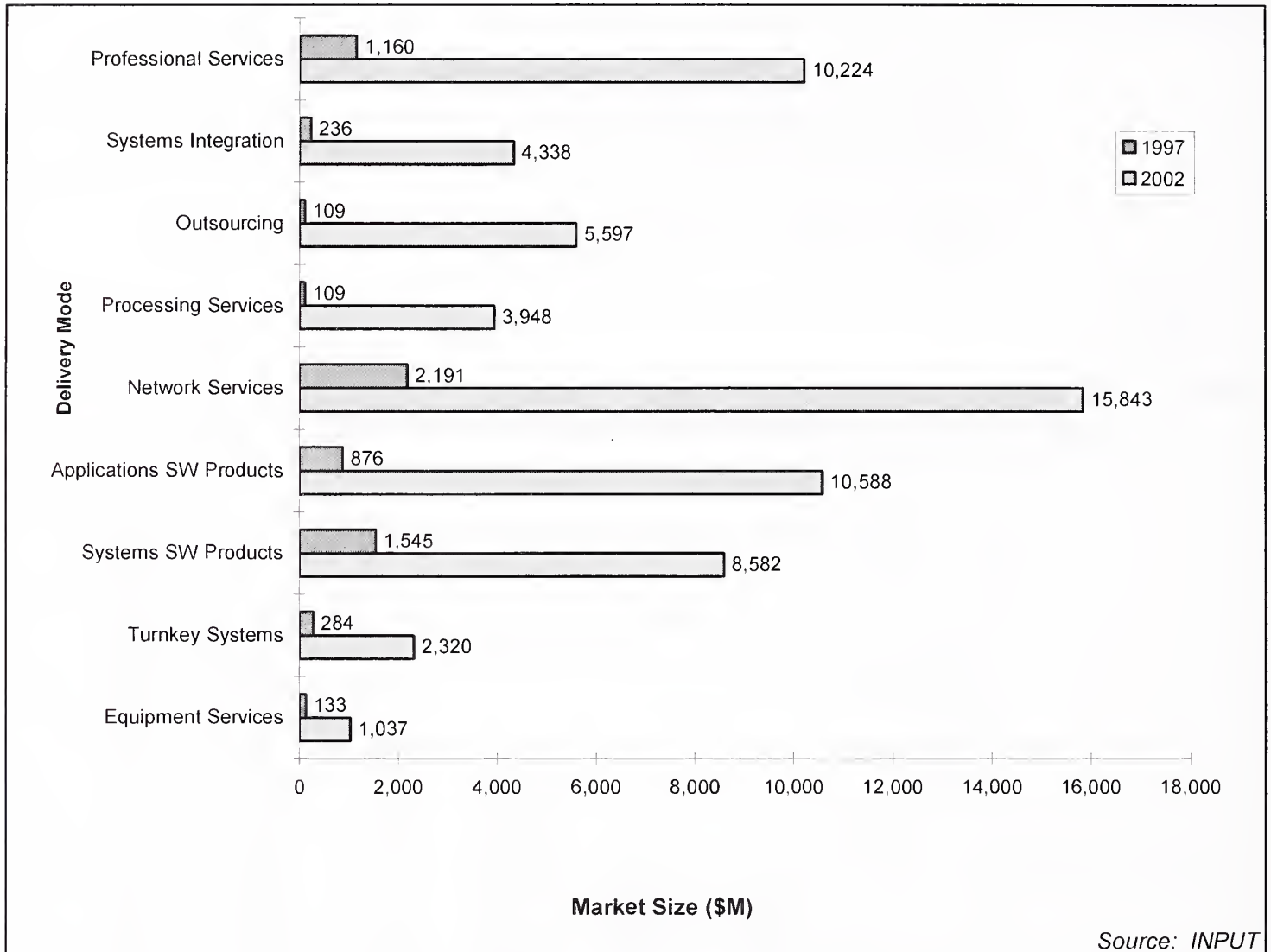


Exhibit V-6

Internet/Intranet Market by Delivery Mode, 1997-2002: Europe

D**Asia-Pacific**

Exhibit V-7 shows the Asia-Pacific market for all Internet and Intranet software and services, 1997 to 2002. The market will increase in value by 66% per year over this period.

Exhibit V-8 shows a breakdown of the Asia-Pacific market by delivery mode.

Exhibit V-7

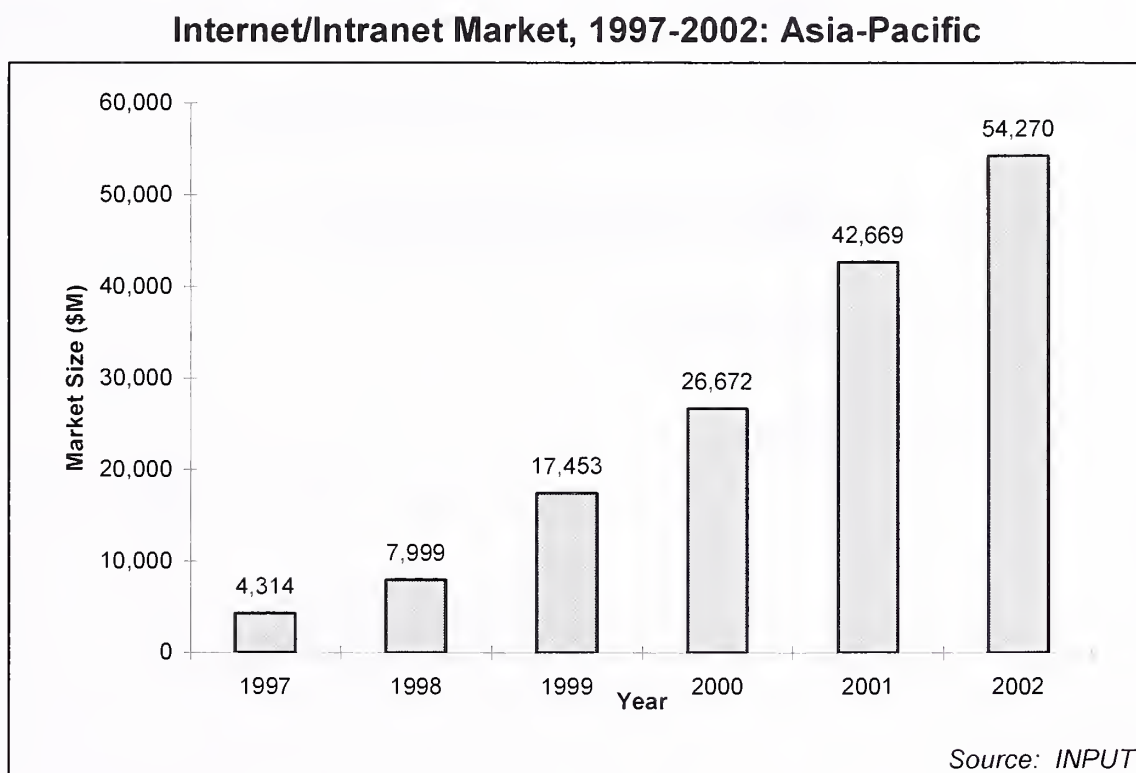
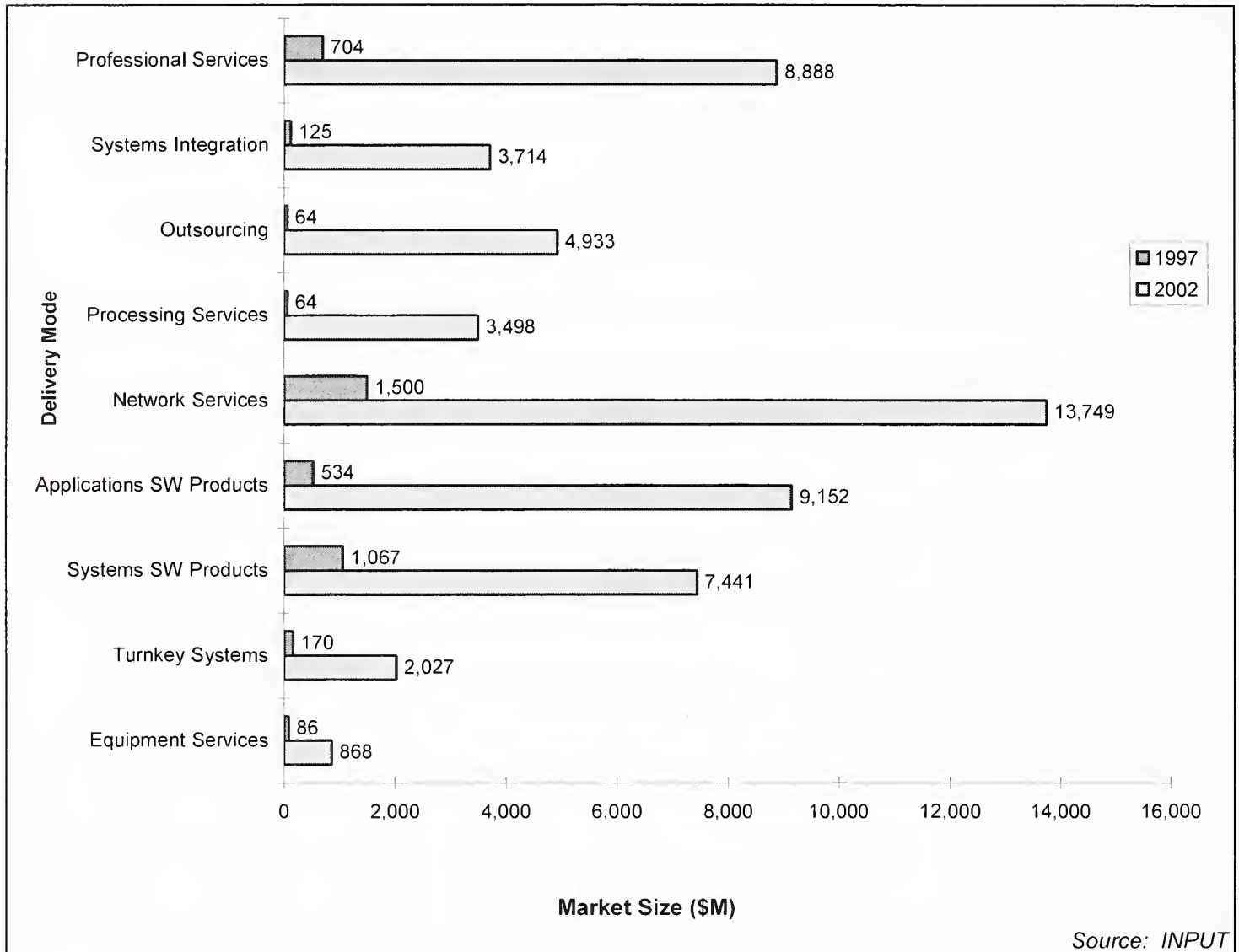


Exhibit V-8

Internet/Intranet Market by Delivery Mode, 1997-2002: Asia-Pacific

E**Middle East and Africa**

Exhibit V-9 shows the Middle East and African market for all Internet and Intranet software and services, 1997 to 2002. The market will increase in value by 82% per year over this period.

Exhibit V-10 shows a breakdown of the Middle East and African market by delivery mode.

Exhibit V-9

Internet/Intranet Market, 1997-2002: Middle East and Africa

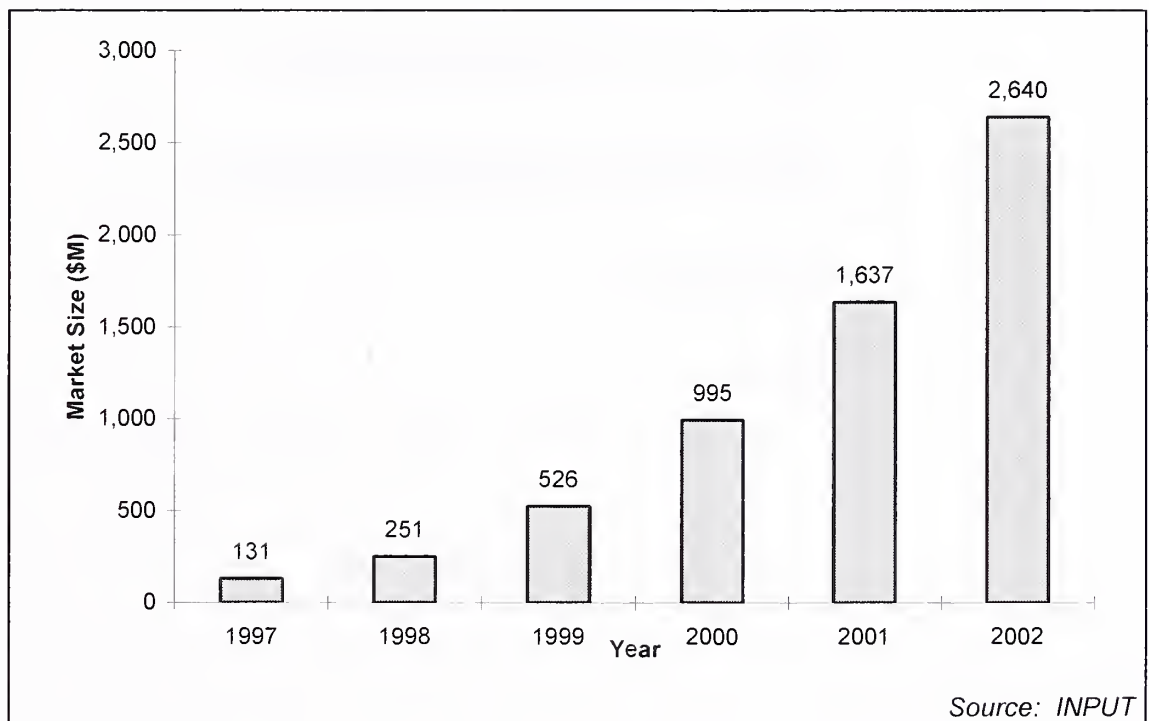
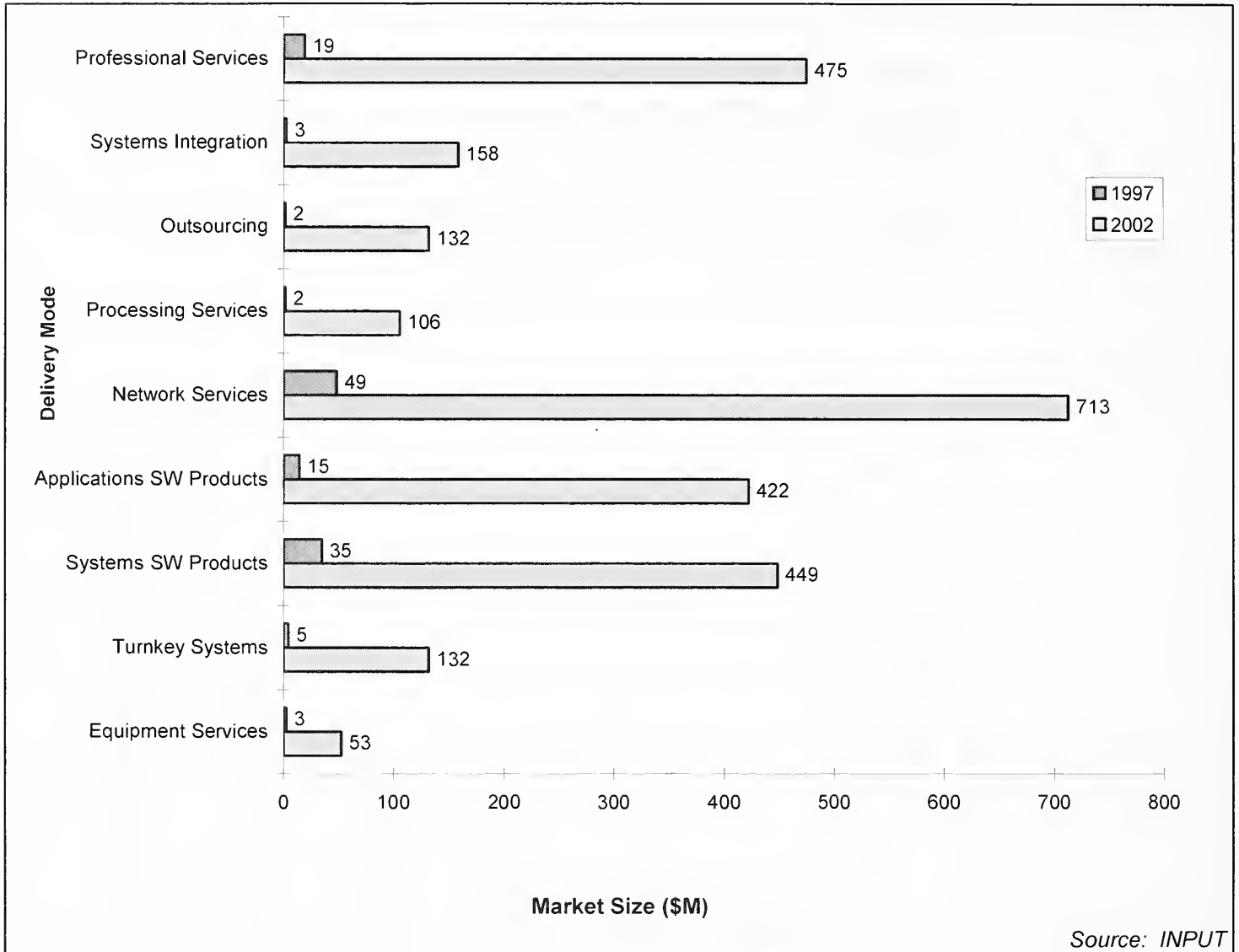


Exhibit V-10

Internet/Intranet Market by Delivery Mode, 1997-2002: Middle East and Africa

F**Latin America**

Exhibit V-11 shows the worldwide market for all Internet and Intranet software and services, 1997 to 2002. The market will increase in value by 82% per year over this period.

Exhibit V-12 shows a breakdown of the Latin American market by delivery mode.

Exhibit V-11

Internet/Intranet Market, 1997-2002: Latin America

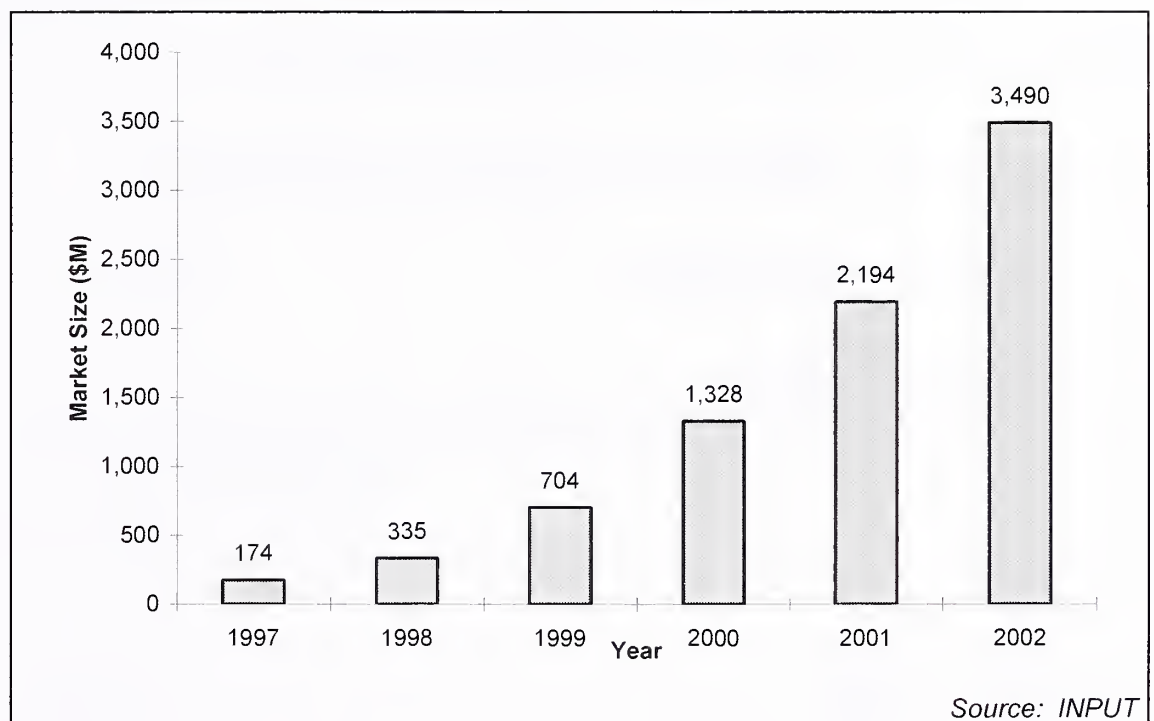
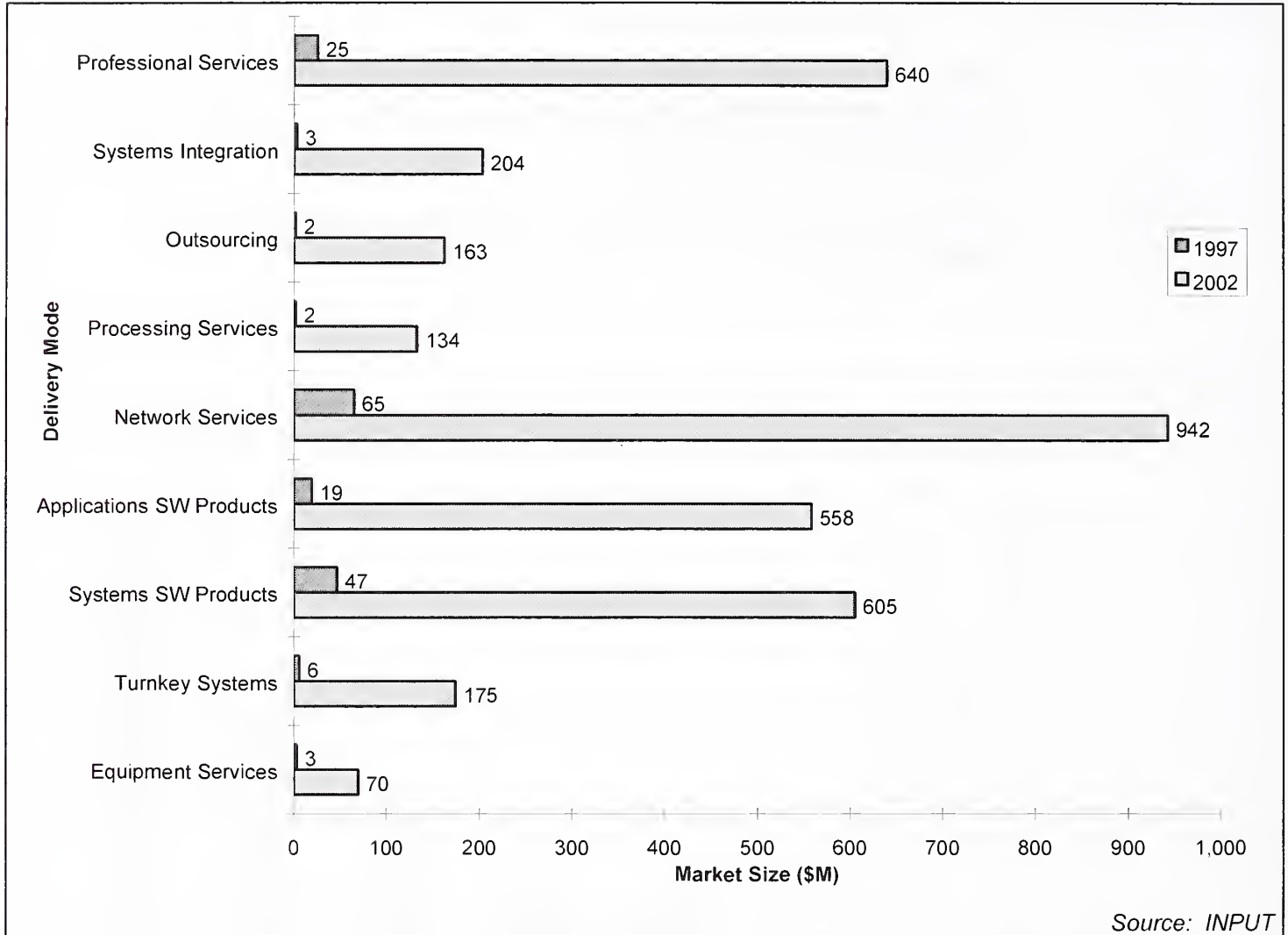


Exhibit V-12

Internet/Intranet Market by Delivery Mode, 1997-2002: Latin America



Country Forecasts: Overall Internet/Intranet Markets

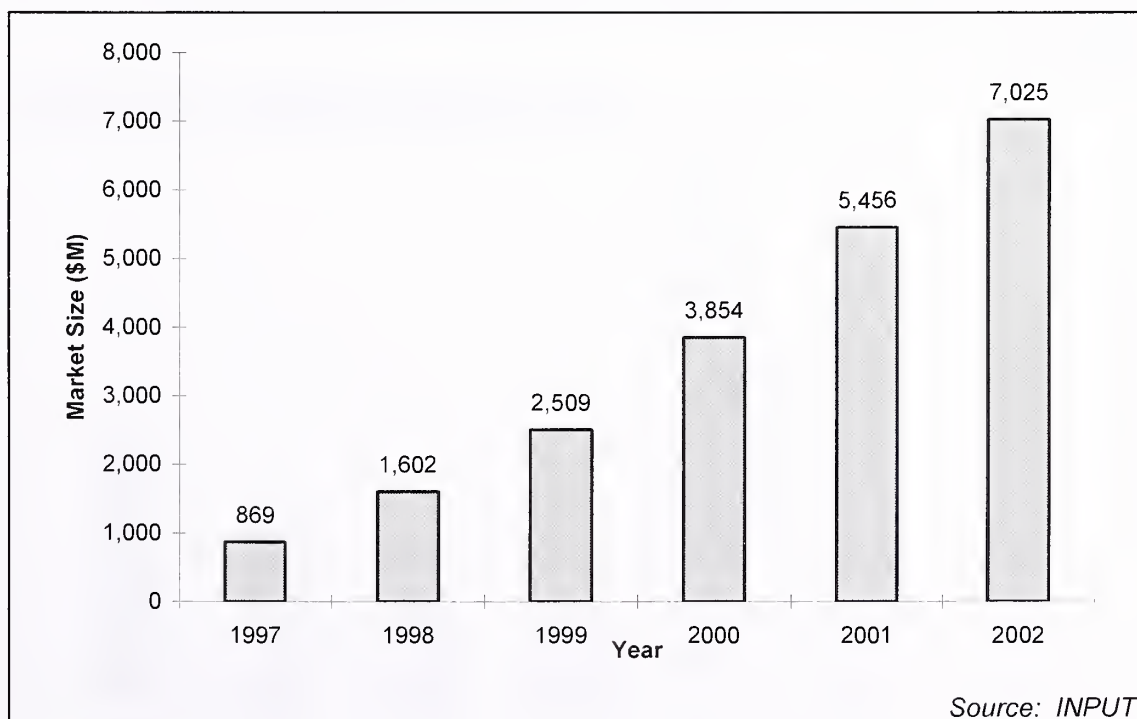
A

North America

1. Canada

Exhibit VI-1

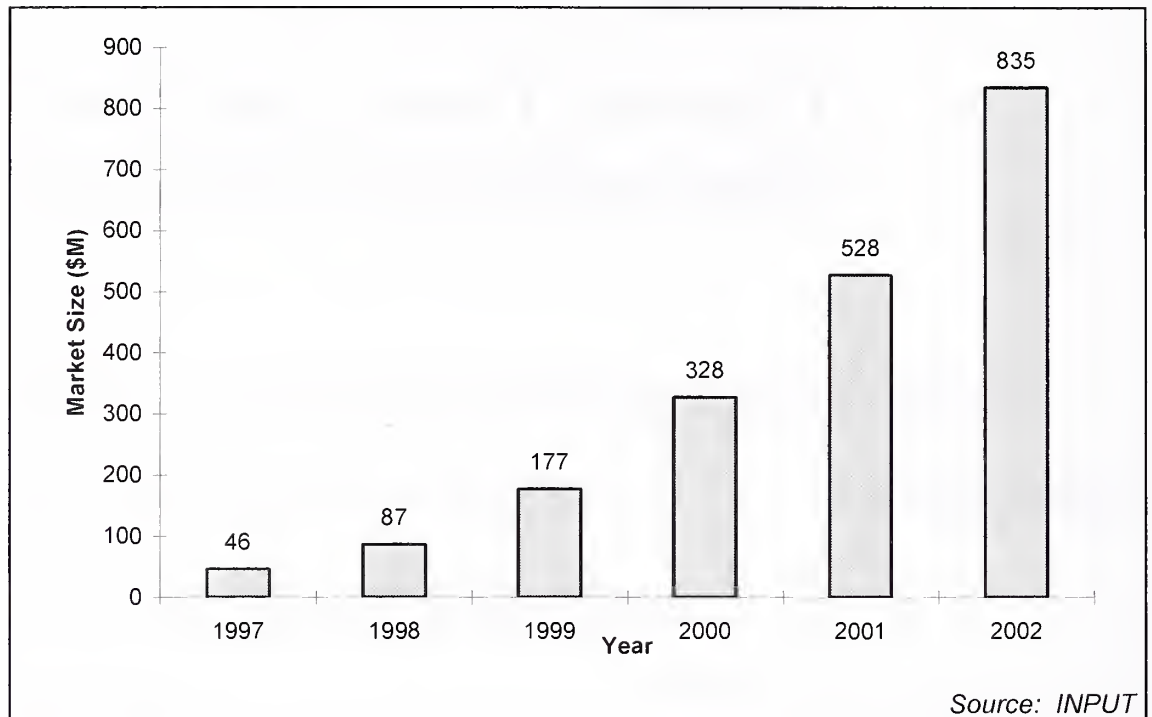
Internet/Intranet Market, 1997-2002: Canada



2. Mexico

Exhibit VI-2

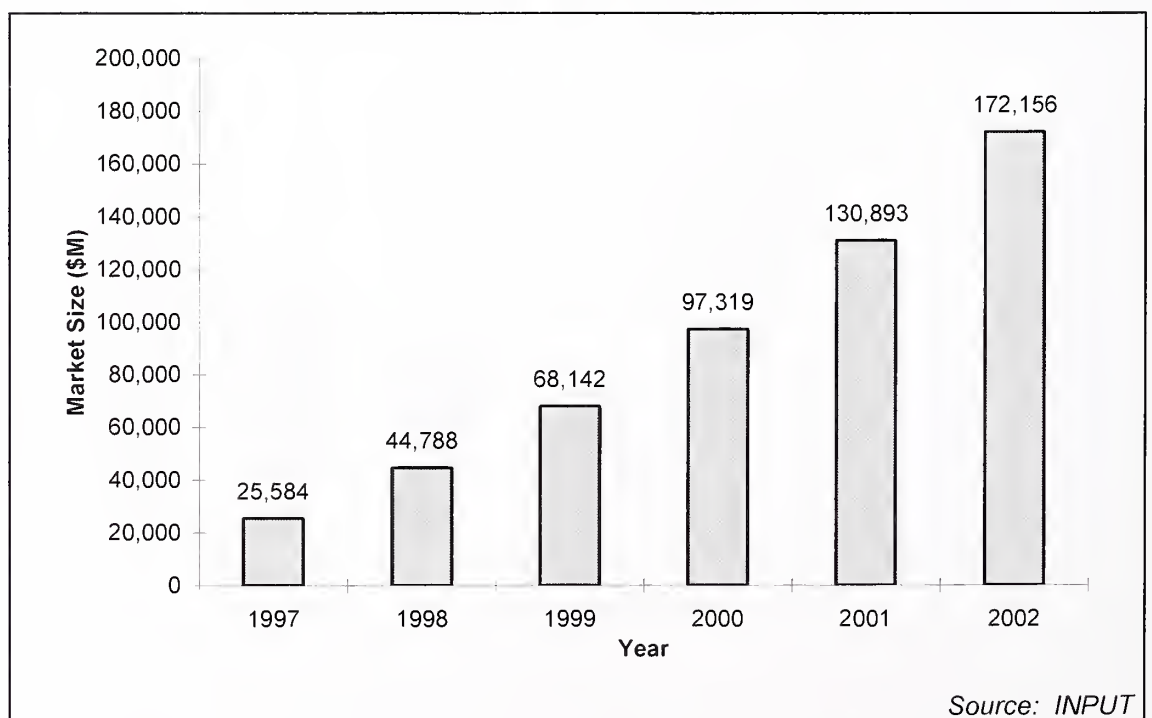
Internet/Intranet Market, 1997-2002: Mexico



3. USA

Exhibit VI-3

Internet/Intranet Market, 1997-2002: USA



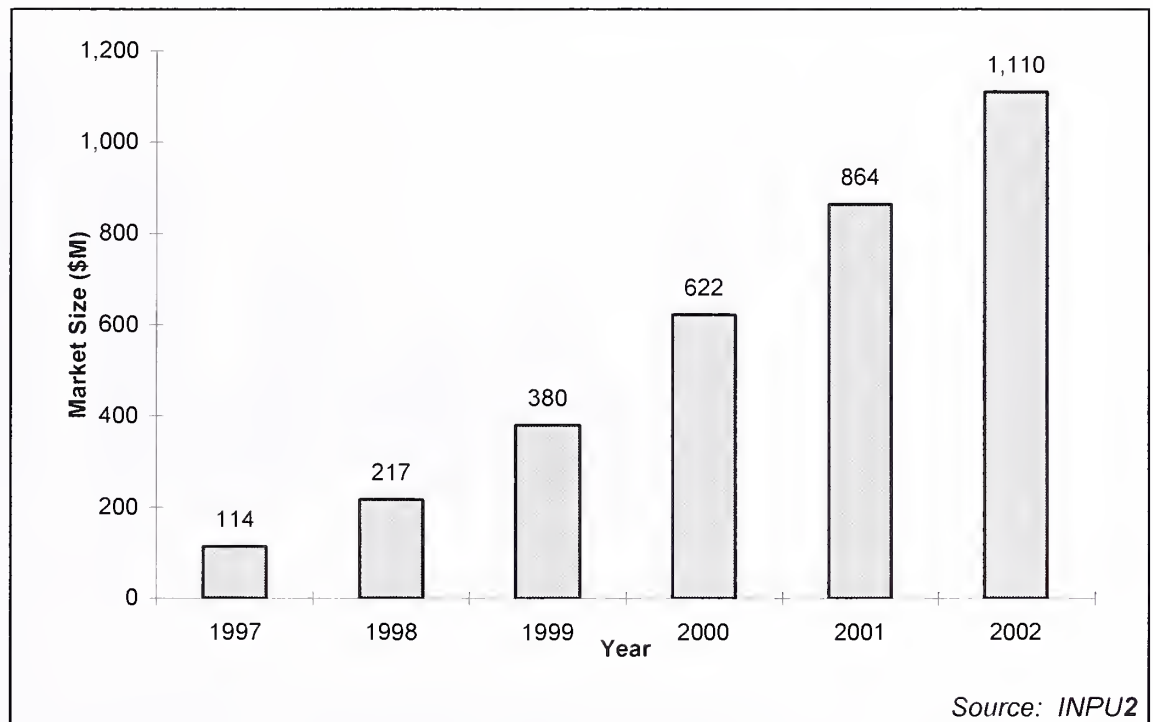
B

Europe

1. Austria

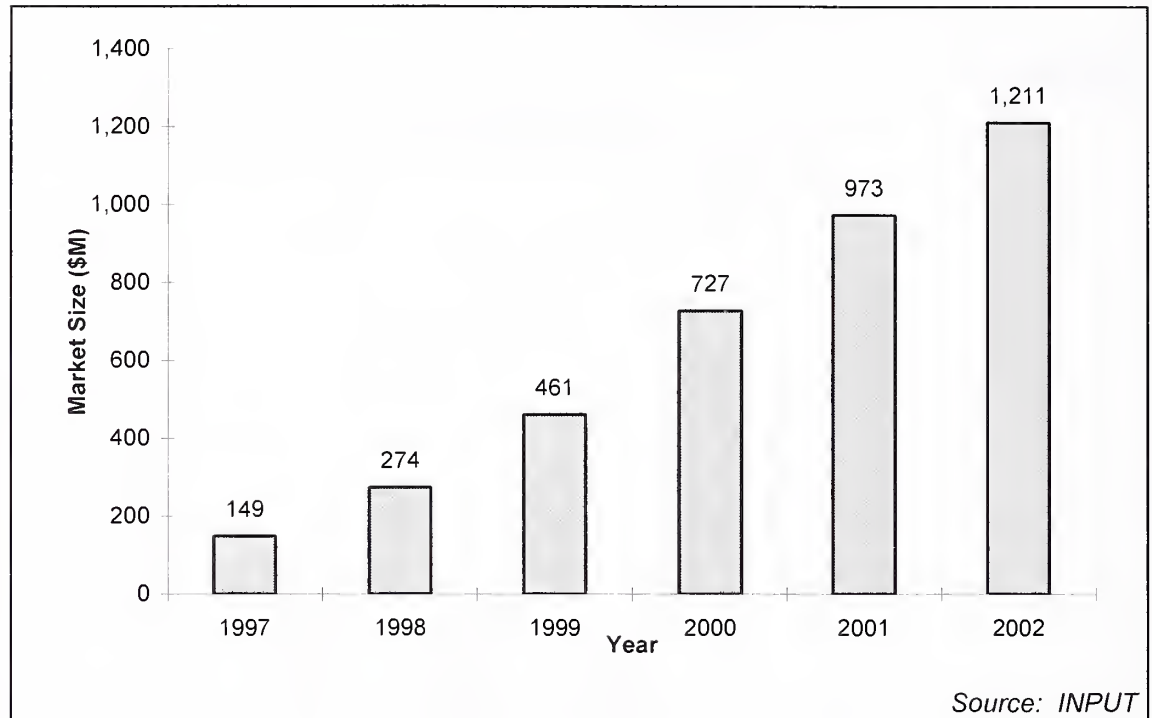
Exhibit VI-4

Internet/Intranet Market, 1997-2002: Austria



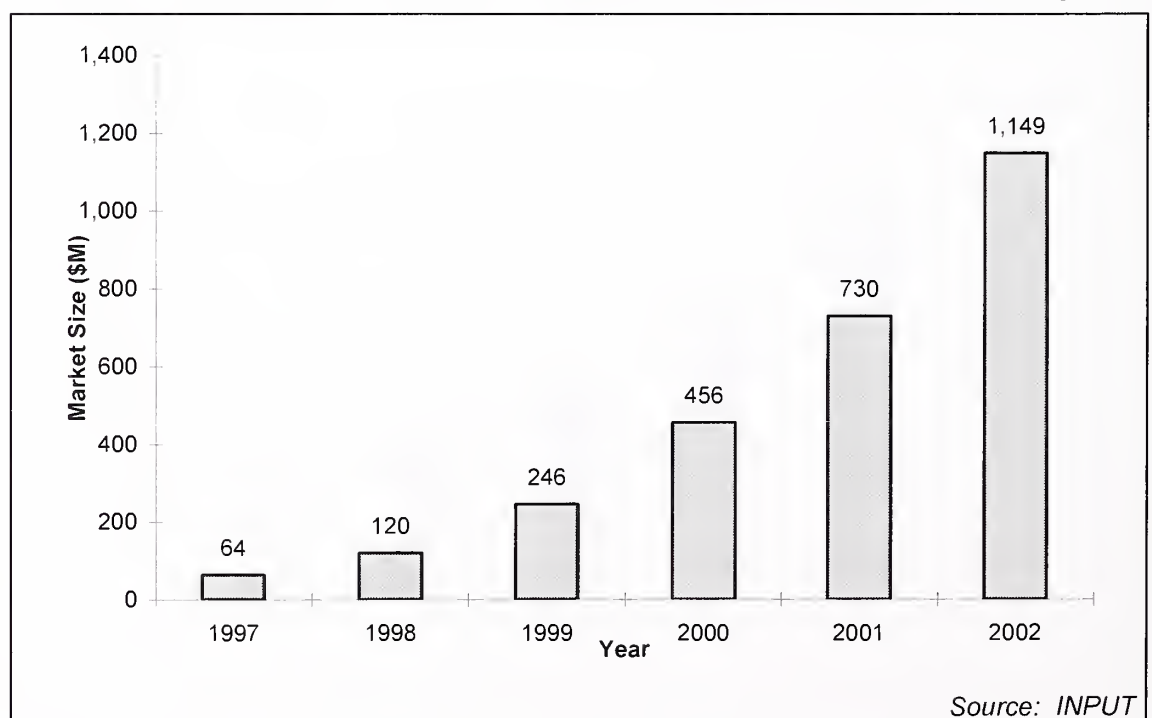
2. Belgium

Exhibit VI-5

Internet/Intranet Market, 1997-2002: Belgium

3. Central & Eastern Europe

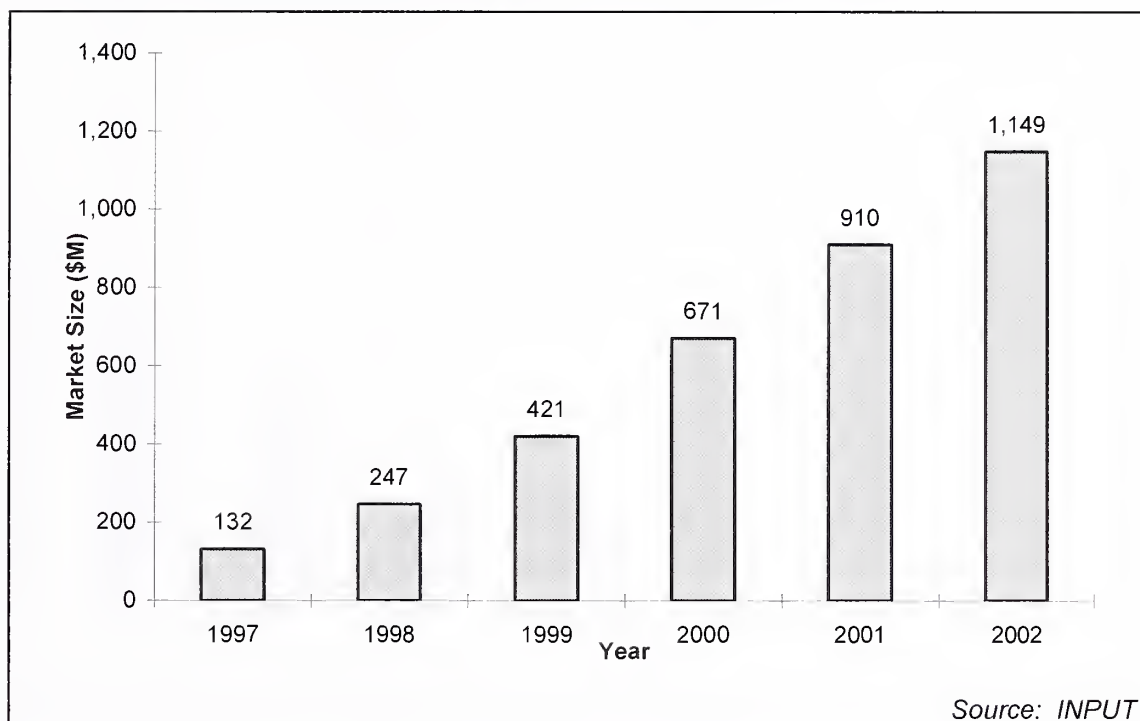
Exhibit VI-6

Internet/Intranet Market, 1997-2002: Central & Eastern Europe

4. Denmark

Exhibit VI-7

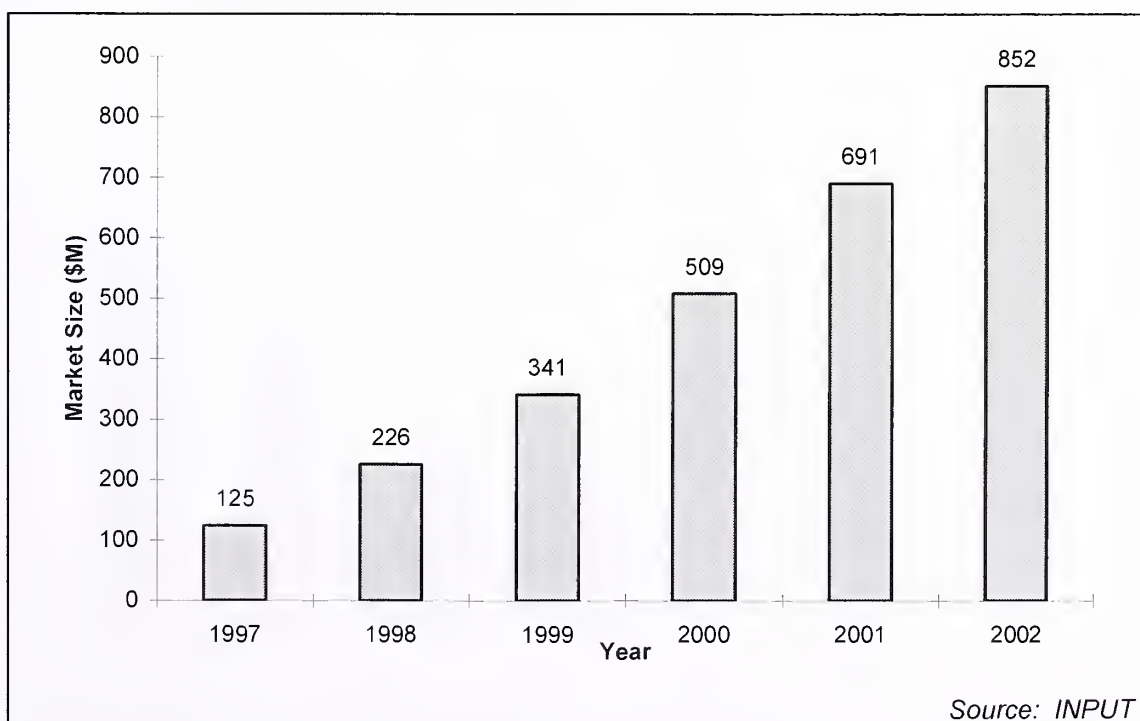
Internet/Intranet Market, 1997-2002: Denmark



5. Finland

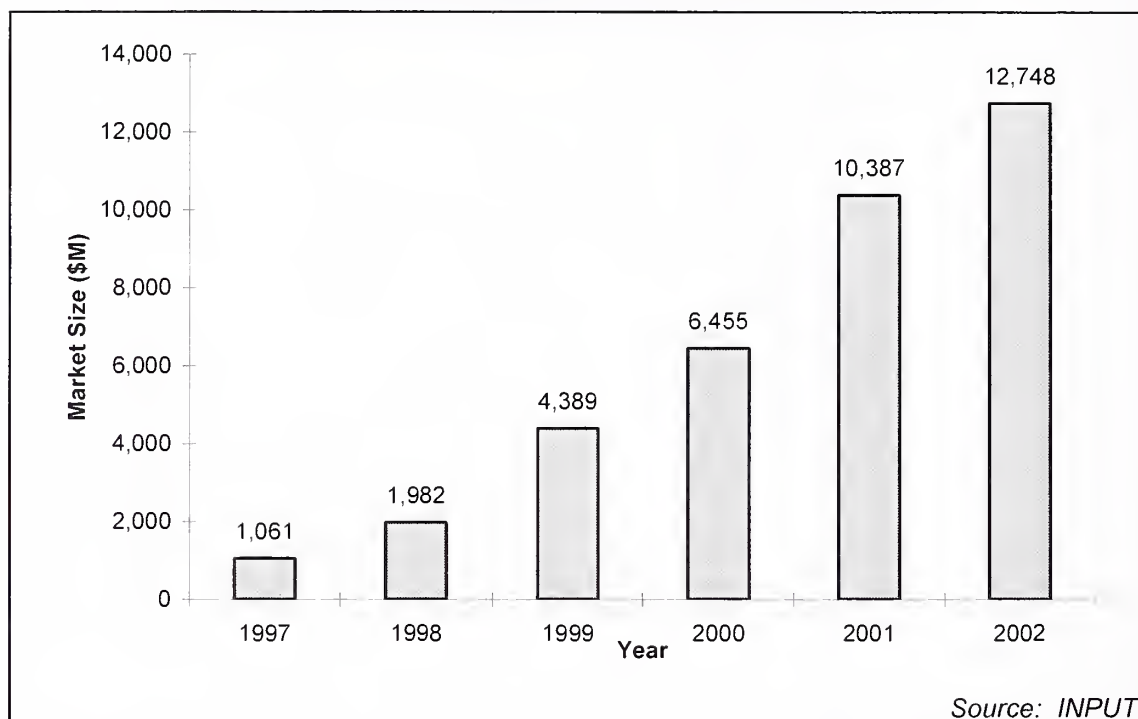
Exhibit VI-8

Internet/Intranet Market, 1997-2002: Finland



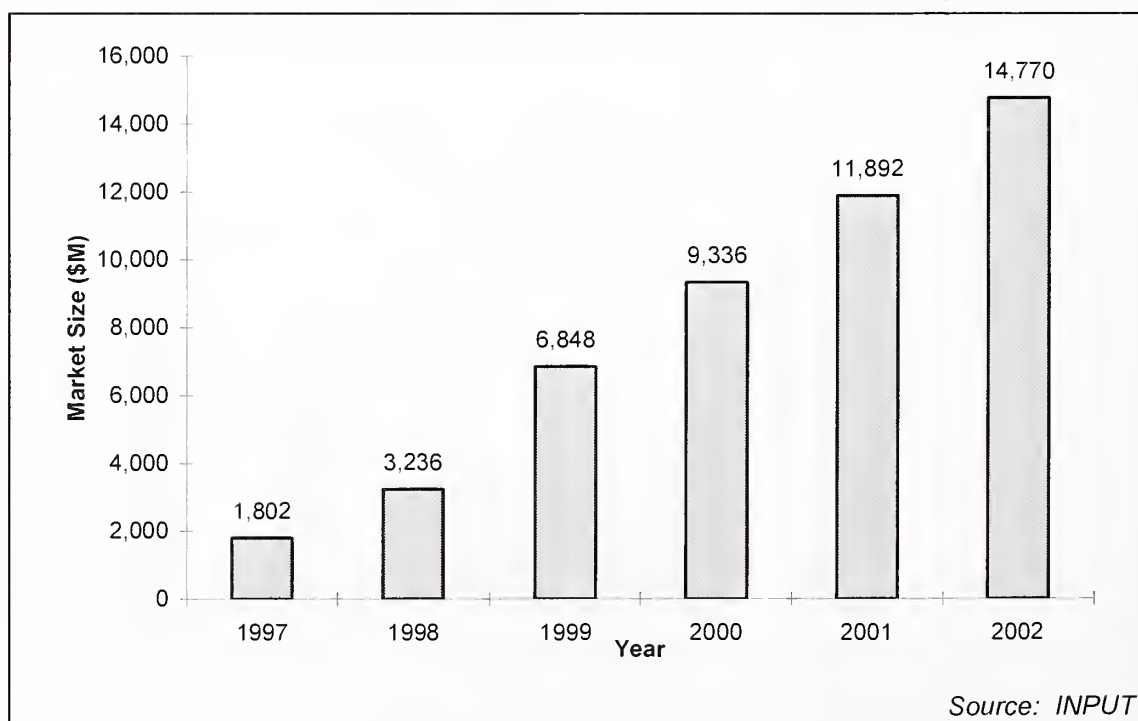
6. France

Exhibit VI-9

Internet/Intranet Market, 1997-2002: France

7. Germany

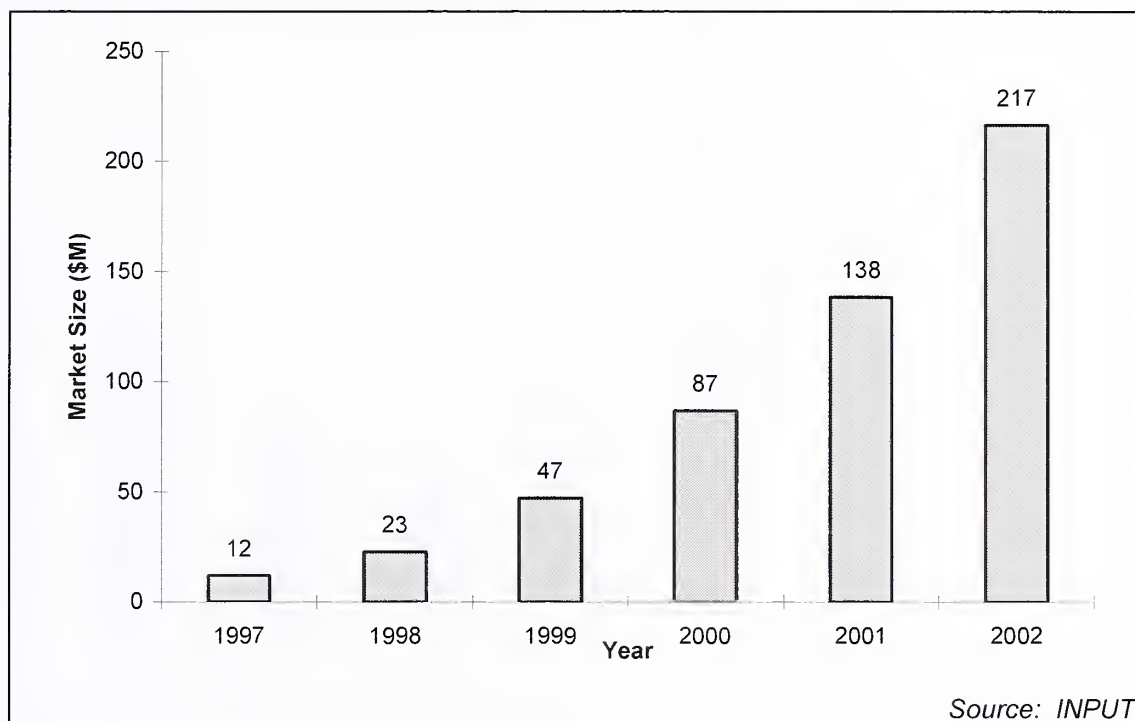
Exhibit VI-10

Internet/Intranet Market, 1997-2002: Germany

8. Greece

Exhibit VI-11

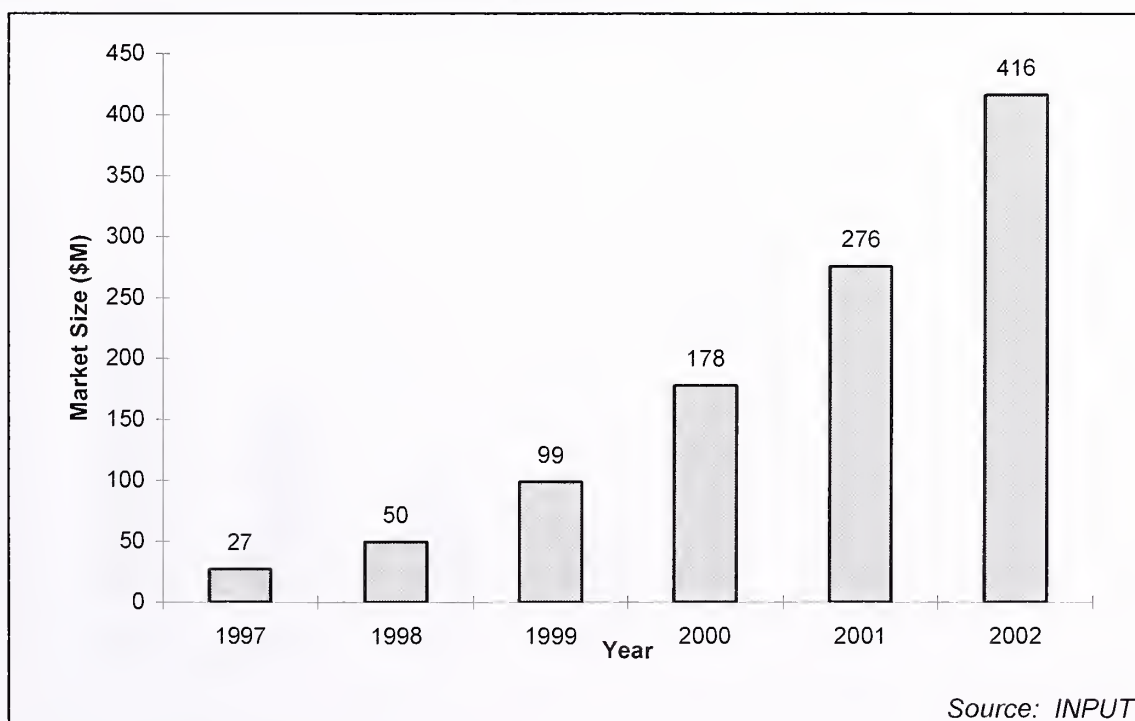
Internet/Intranet Market, 1997-2002: Greece



9. Ireland

Exhibit VI-12

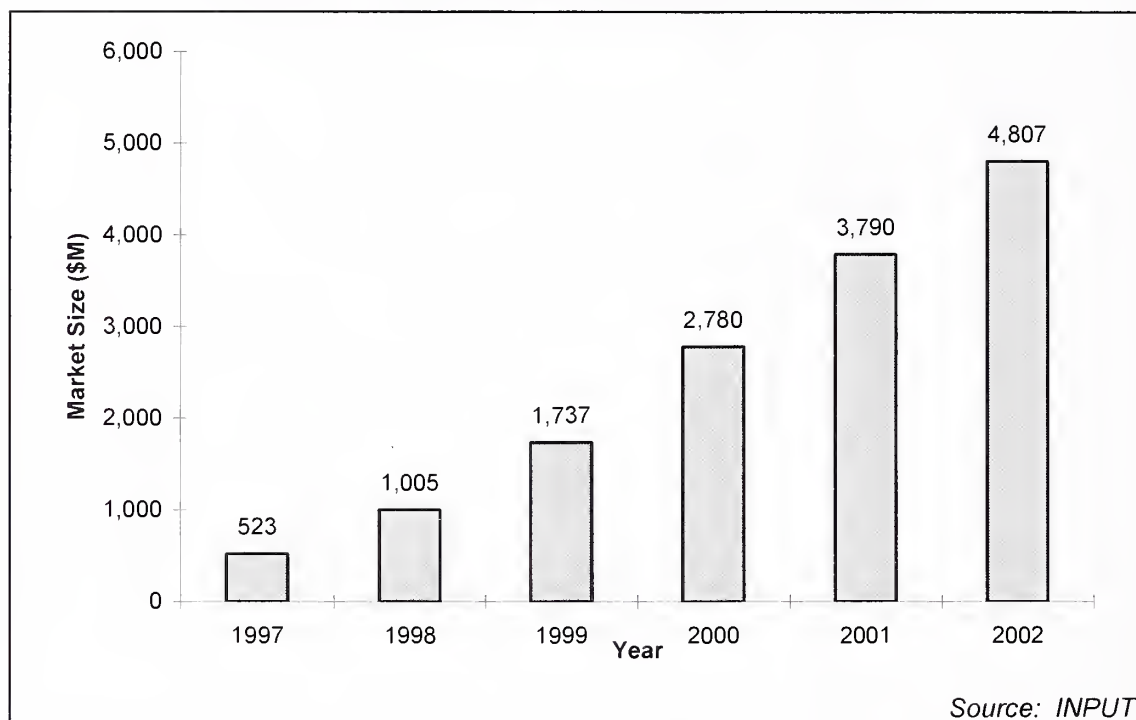
Internet/Intranet Market, 1997-2002: Ireland



10. Italy

Exhibit VI-13

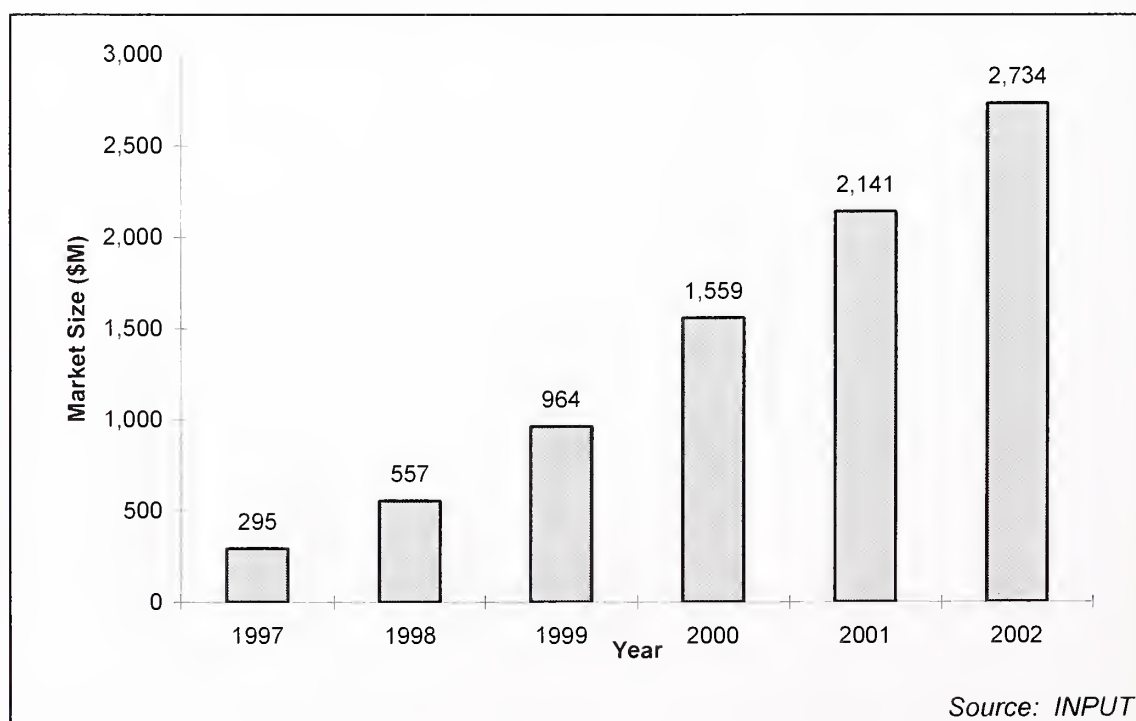
Internet/Intranet Market, 1997-2002: Italy



11. Netherlands

Exhibit VI-14

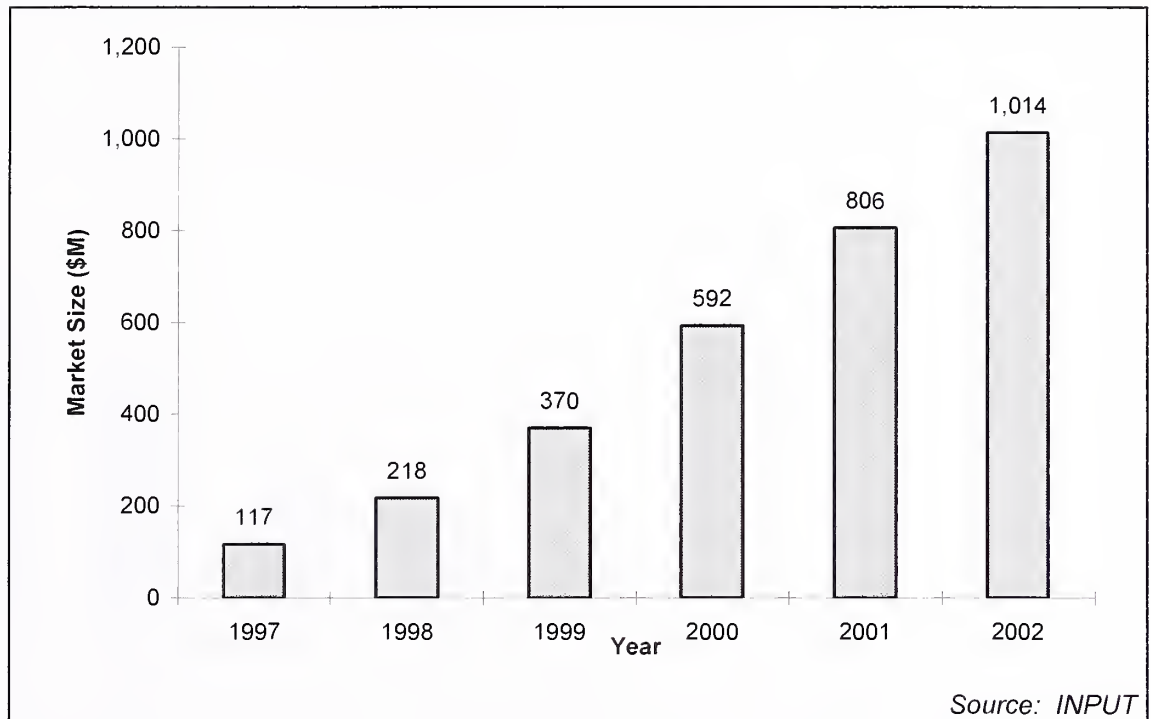
Internet/Intranet Market, 1997-2002: Netherlands



12. Norway

Exhibit VI-15

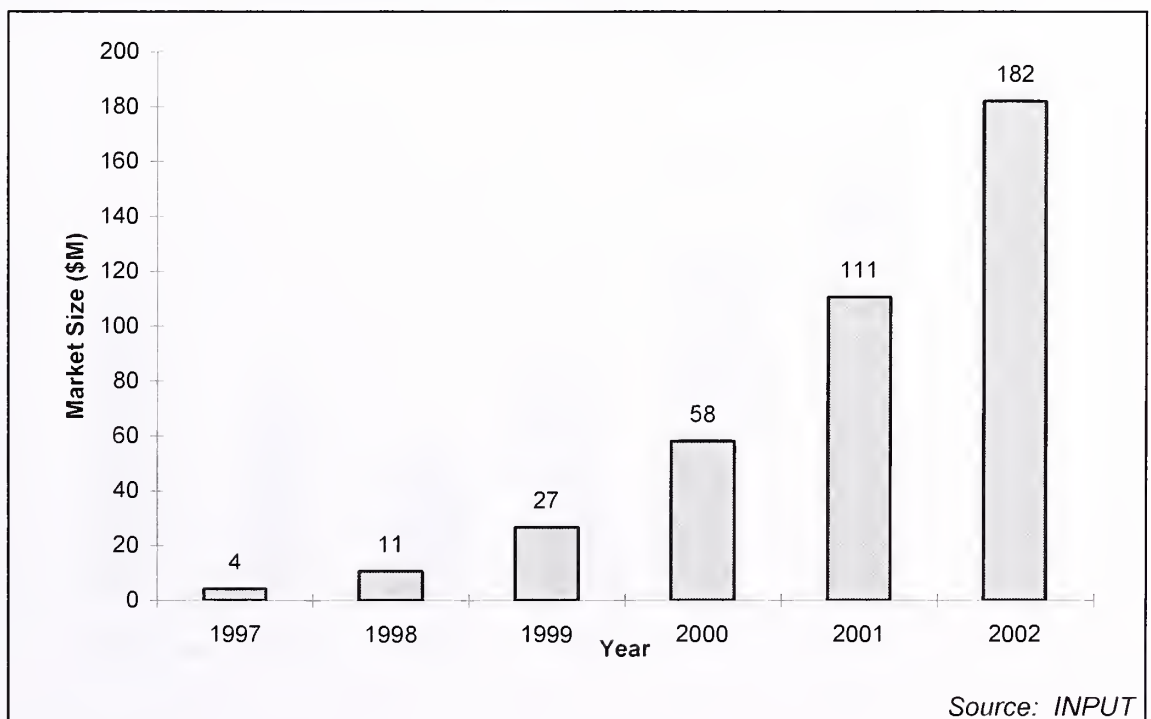
Internet/Intranet Market, 1997-2002: Norway



13. Portugal

Exhibit VI-16

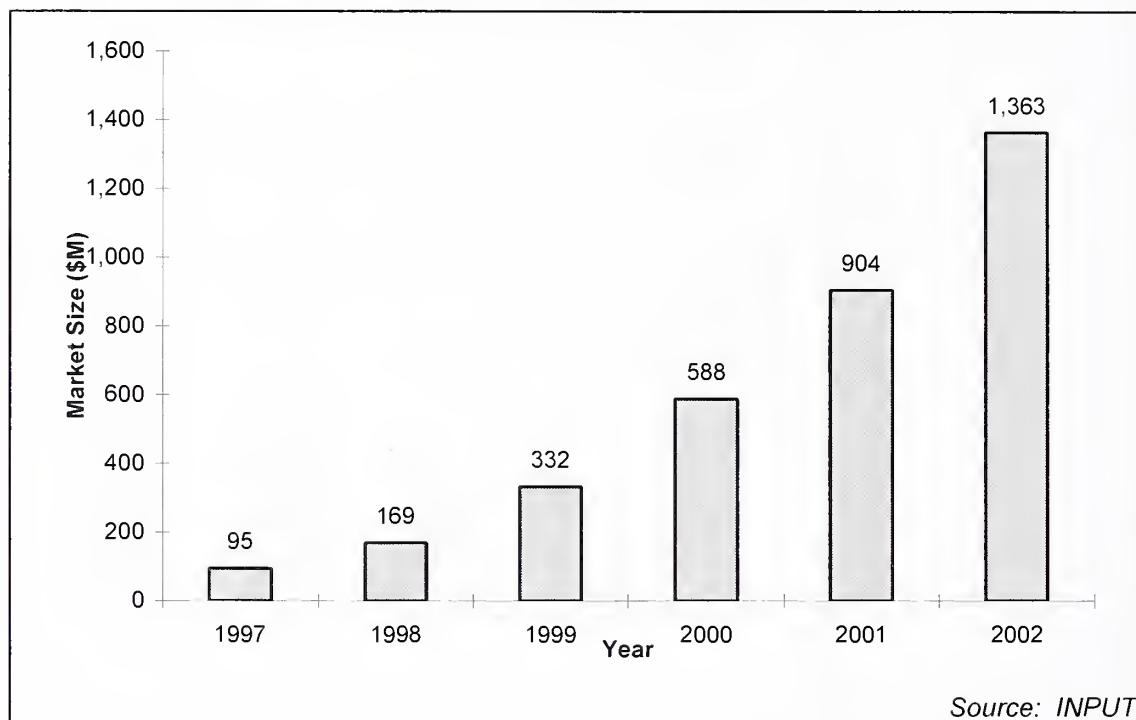
Internet/Intranet Market, 1997-2002: Portugal



14. Spain

Exhibit VI-17

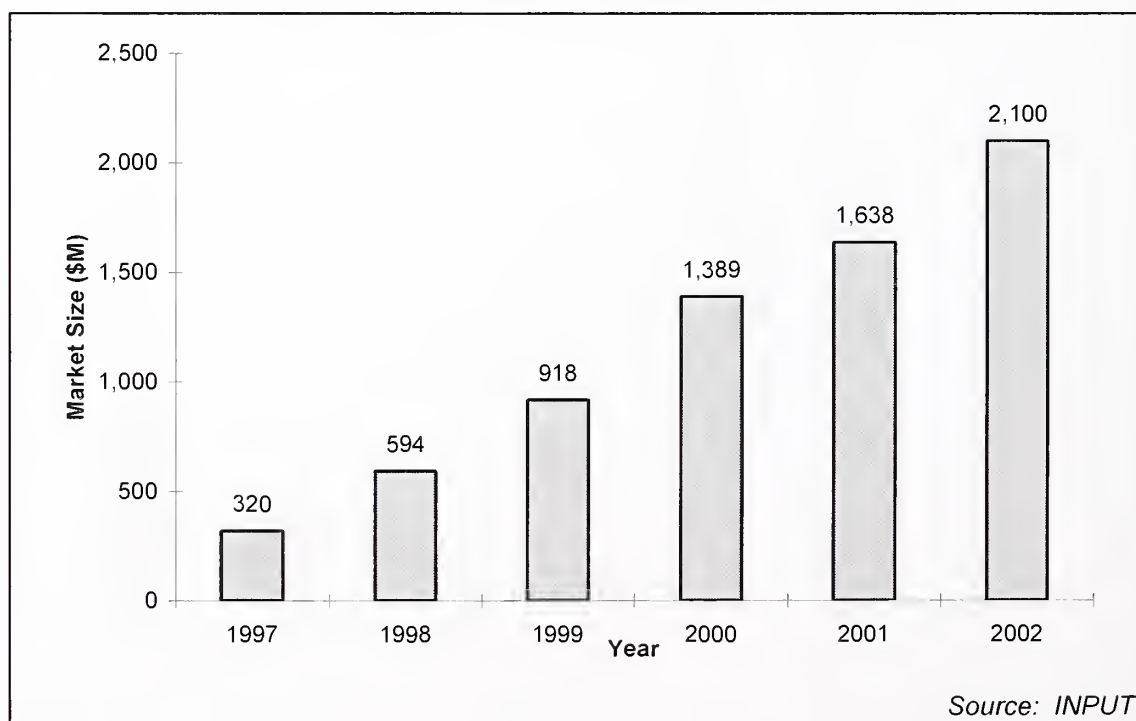
Internet/Intranet Market, 1997-2002: Spain



15. Sweden

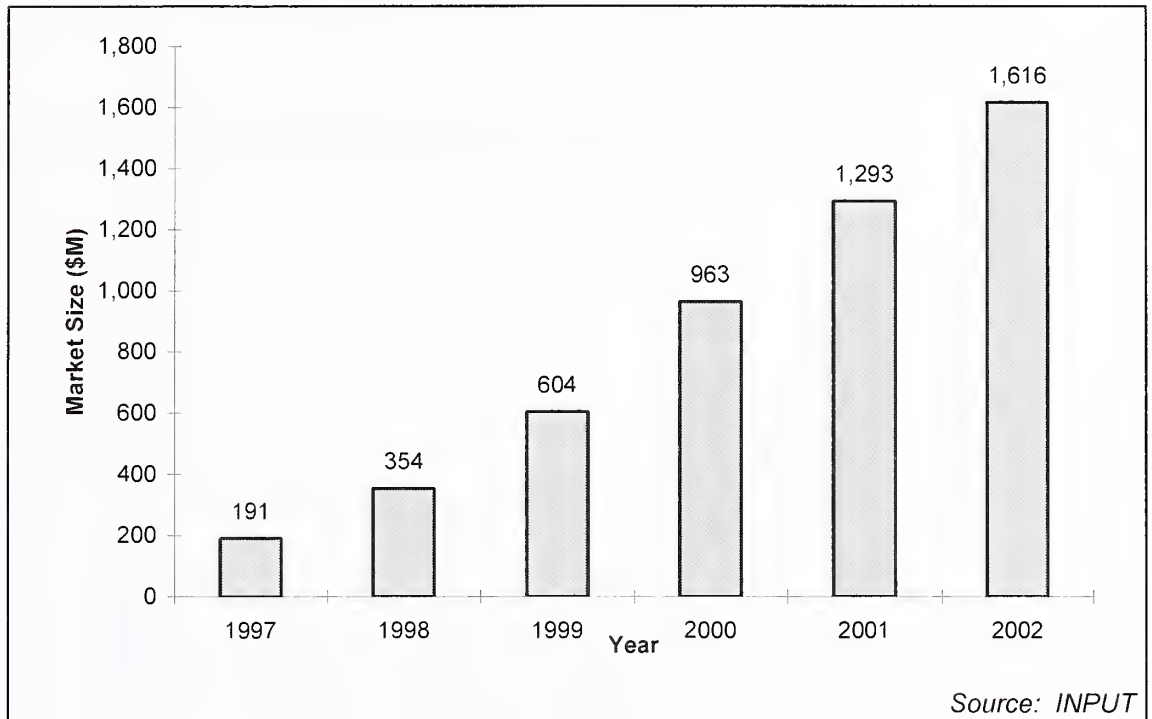
Exhibit VI-18

Internet/Intranet Market, 1997-2002: Sweden



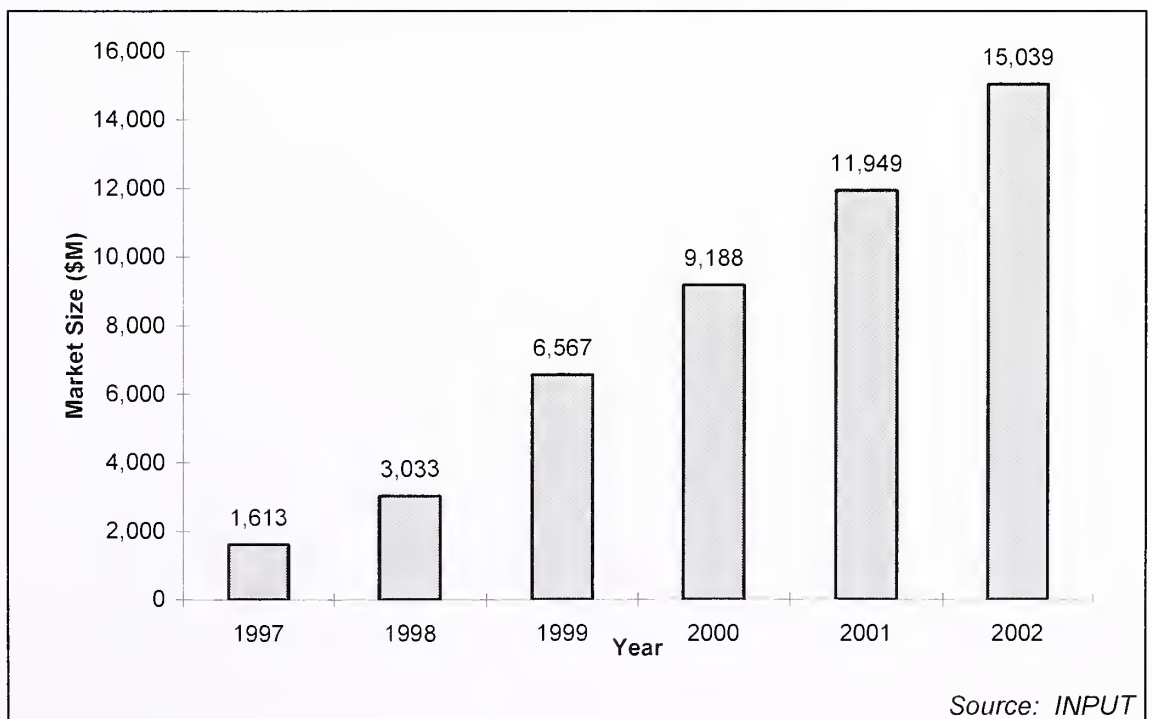
16. Switzerland

Exhibit VI-19

Internet/Intranet Market, 1997-2002: Switzerland

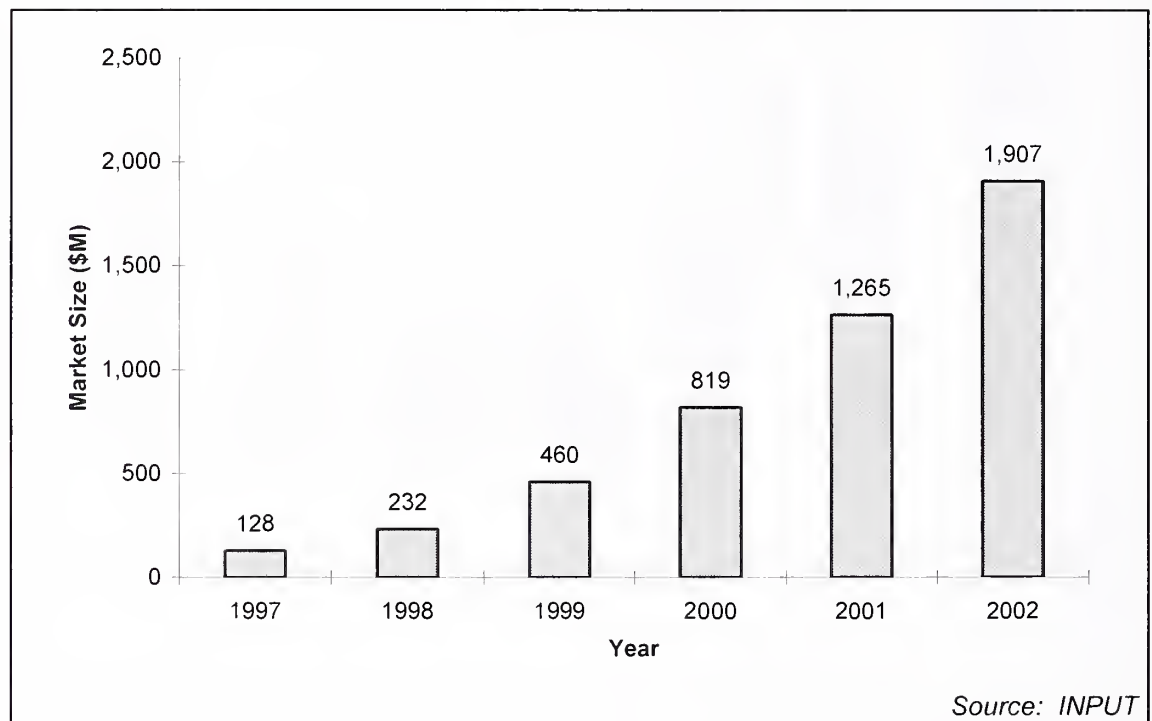
17. UK

Exhibit VI-20

Internet/Intranet Market, 1997-2002: UK

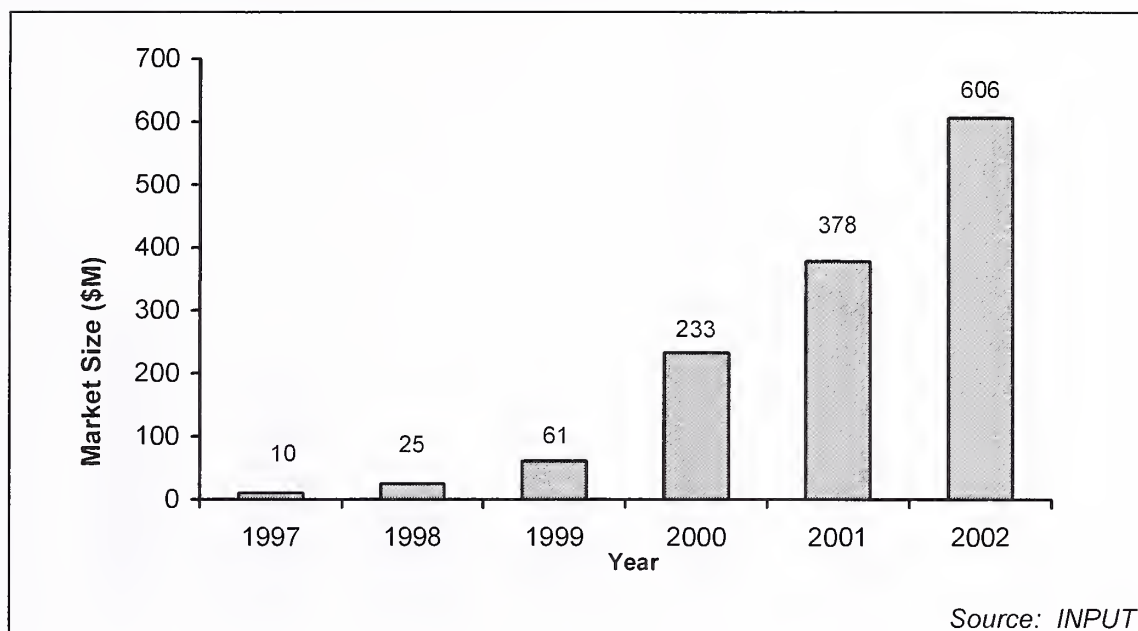
C**Asia-Pacific****1. Australia**

Exhibit VI-21

Internet/Intranet Market, 1997-2002: Australia

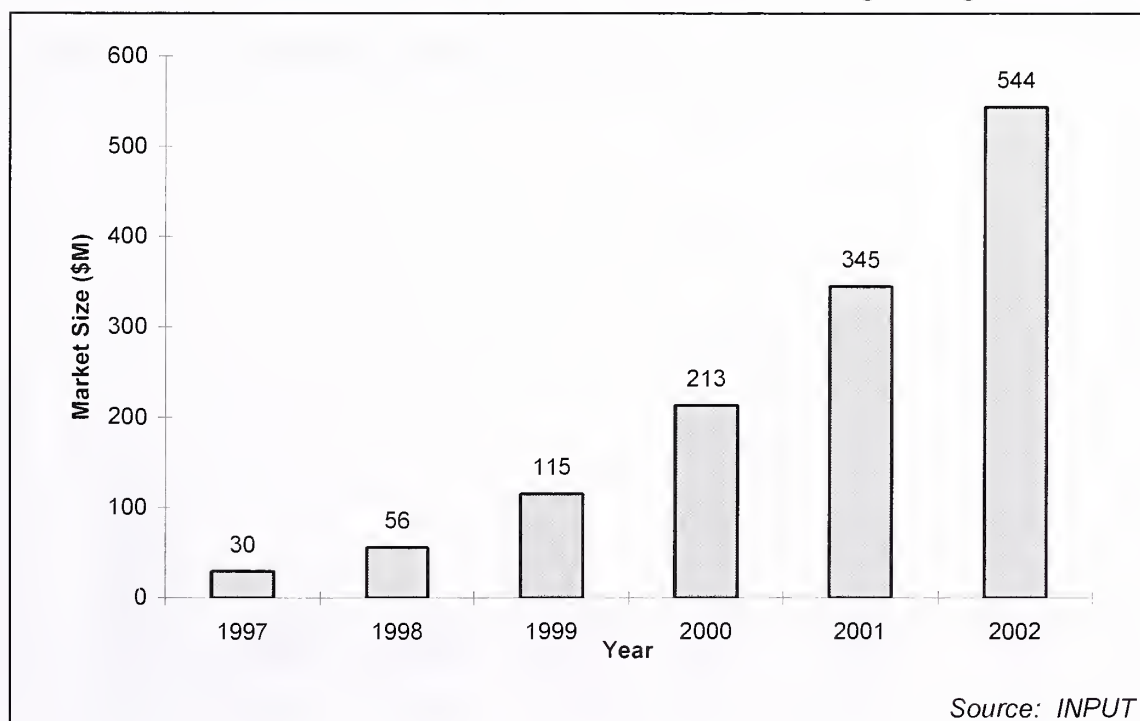
2. China

Exhibit VI-22

Internet/Intranet Market, 1997-2002: China

3. Hong Kong

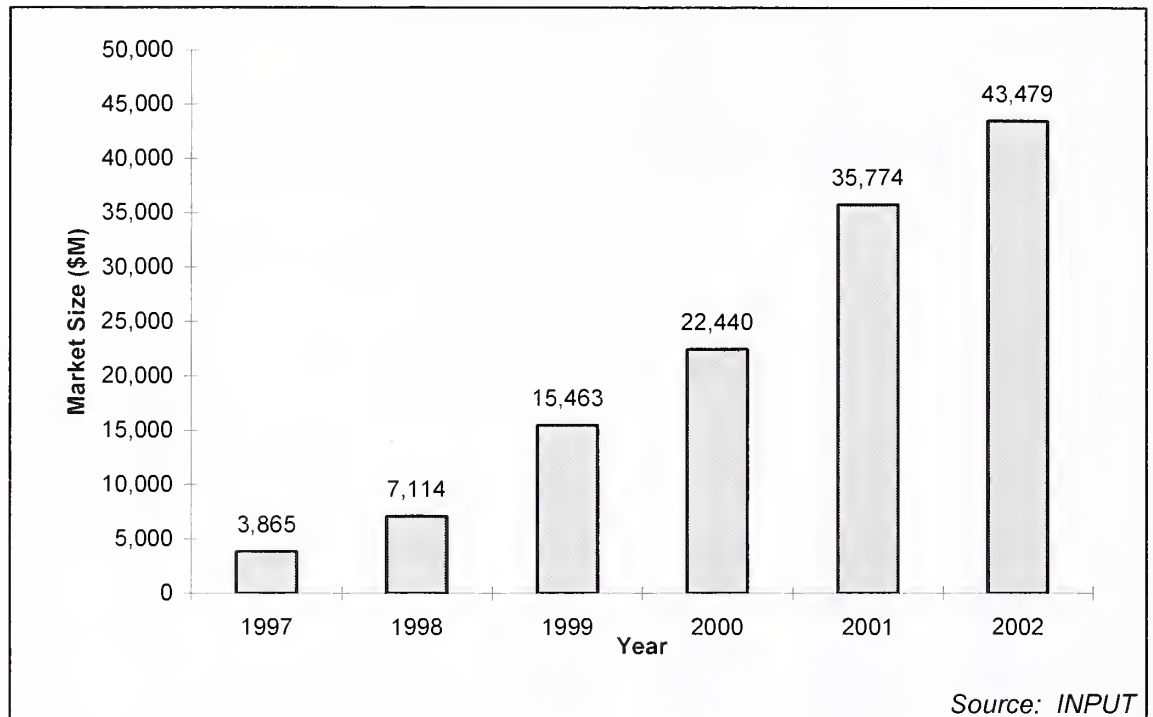
Exhibit VI-23

Internet/Intranet Market, 1997-2002: Hong Kong

4. Japan

Exhibit VI-24

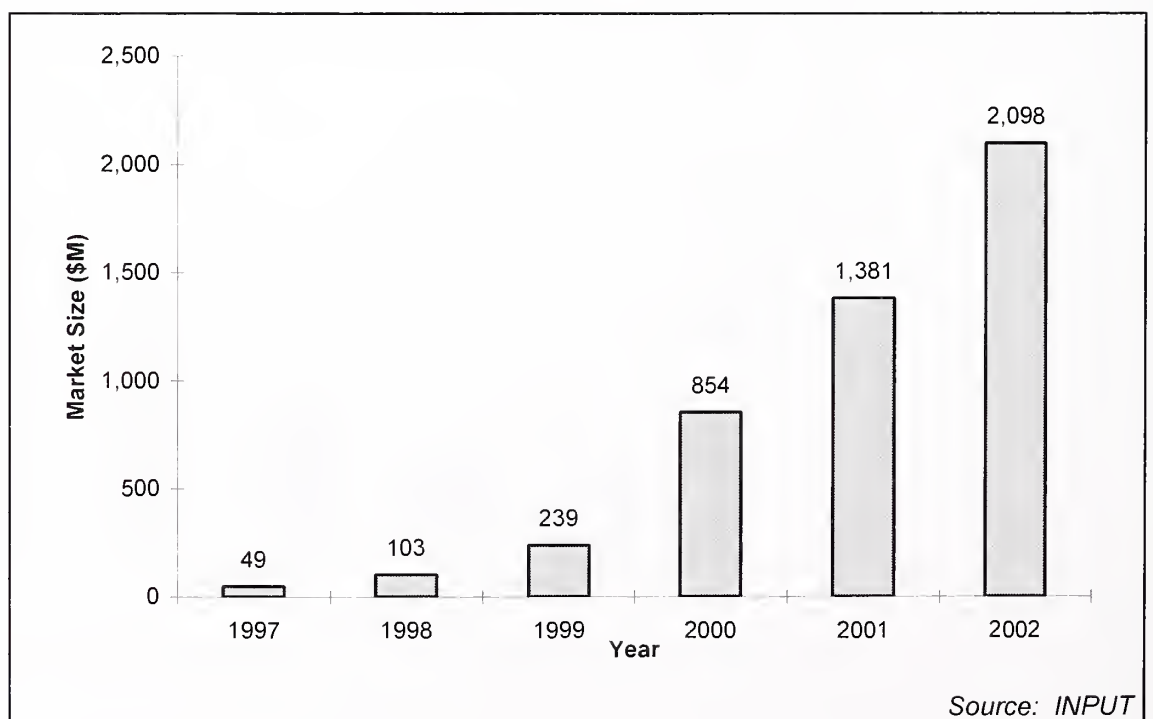
Internet/Intranet Market, 1997-2002: Japan



5. India

Exhibit VI-25

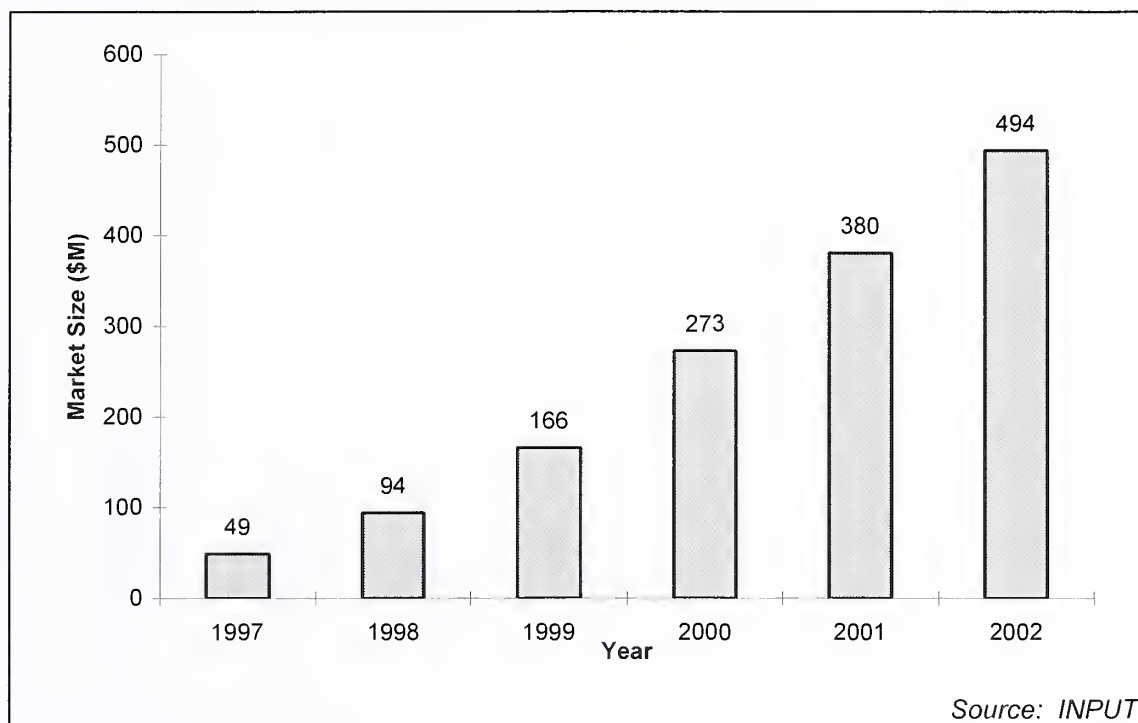
Internet/Intranet Market, 1997-2002: India



6. New Zealand

Exhibit VI-26

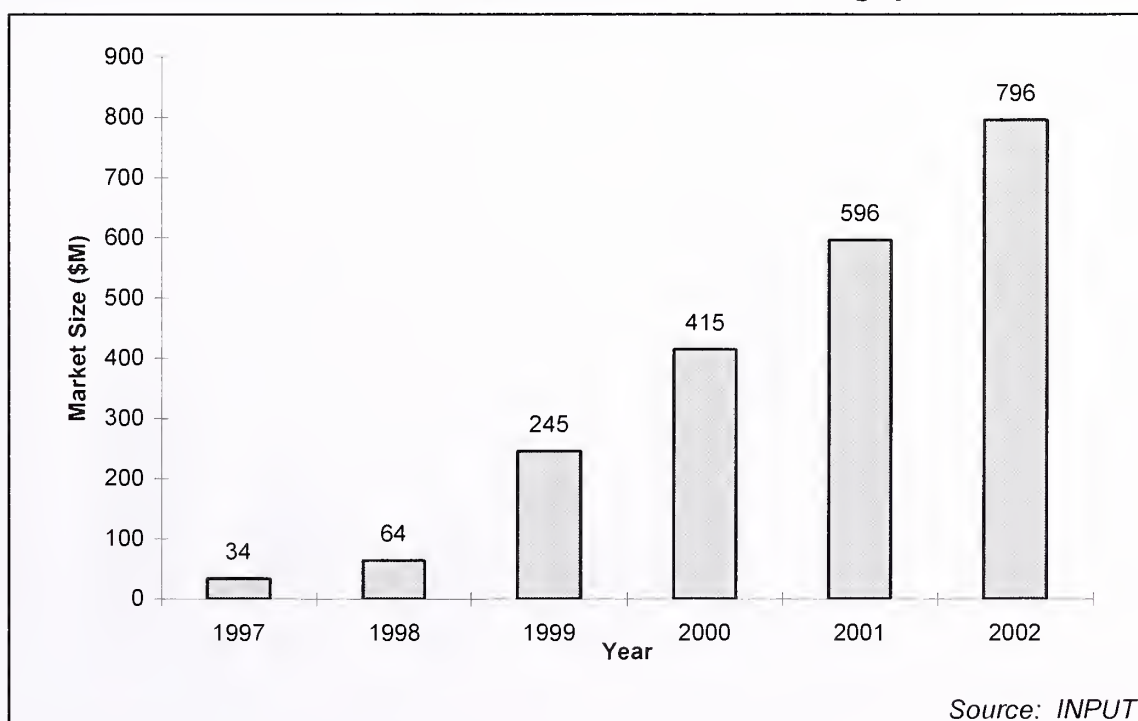
Internet/Intranet Market, 1997-2002: New Zealand



7. Singapore

Exhibit VI-27

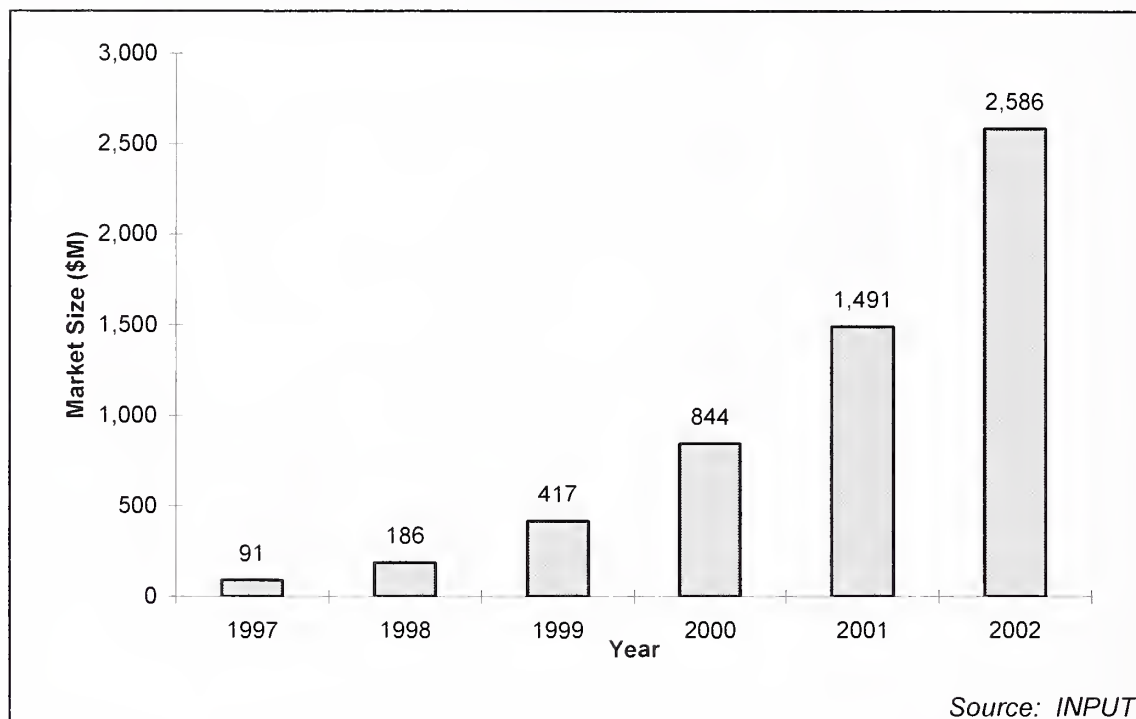
Internet/Intranet Market, 1997-2002: Singapore



8. South Korea

Exhibit VI-28

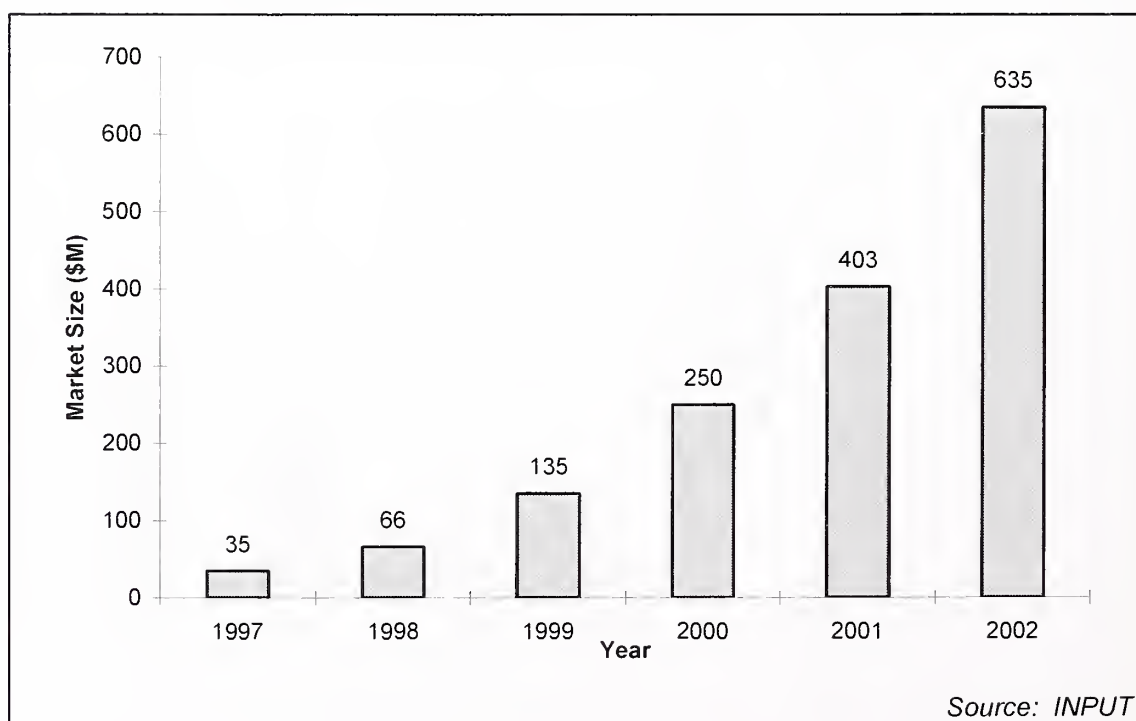
Internet/Intranet Market, 1997-2002: South Korea



9. Taiwan

Exhibit VI-29

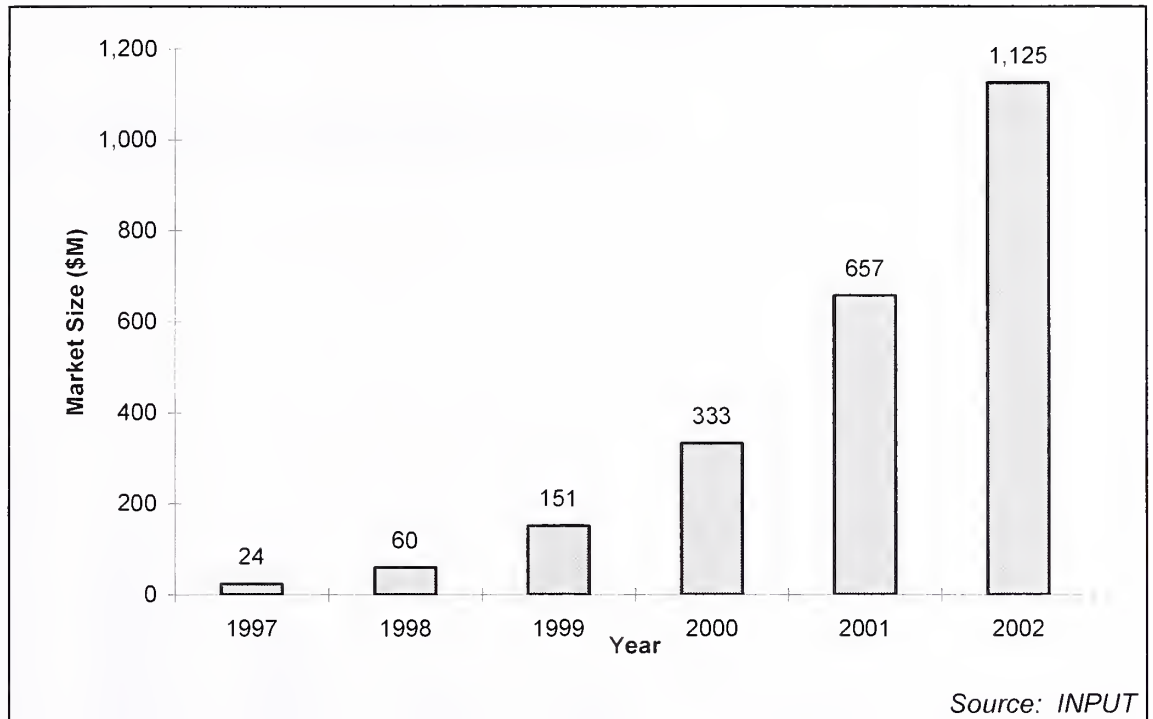
Internet/Intranet Market, 1997-2002: Taiwan



10. Other Asia Pacific

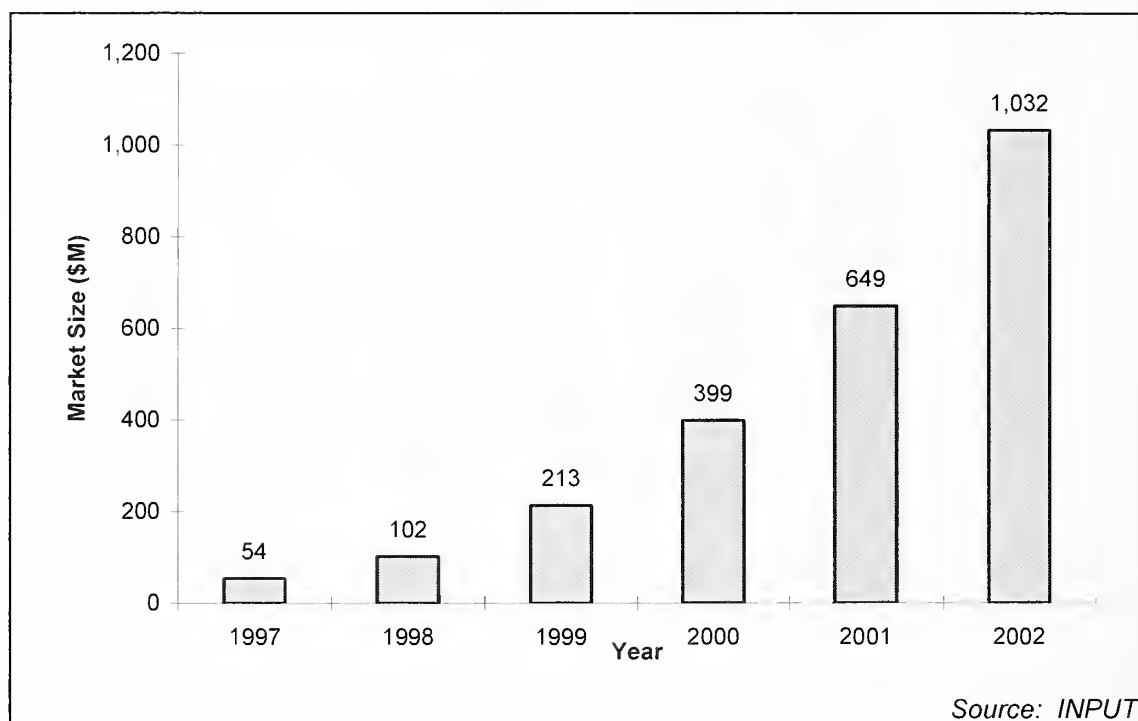
Exhibit VI-30

Internet/Intranet Market, 1997-2002: Other Asia Pacific



D**Latin America****1. Argentina**

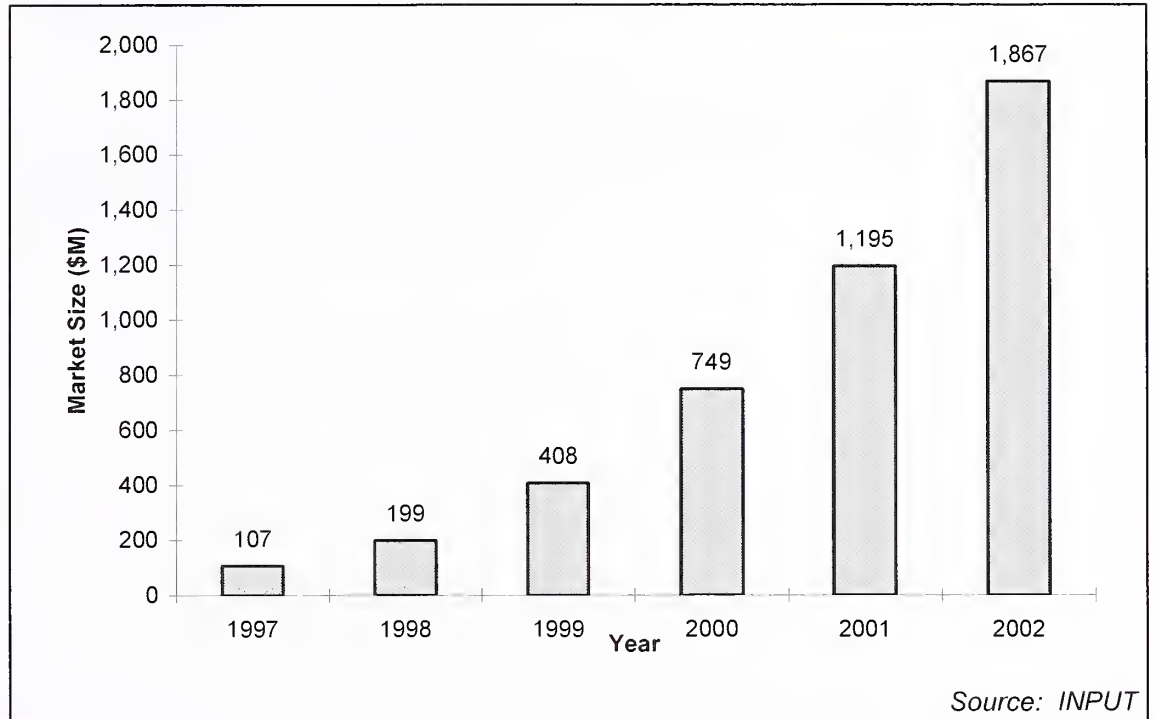
Exhibit VI-31

Internet/Intranet Market, 1997-2002: Argentina

2. Brazil

Exhibit VI-32

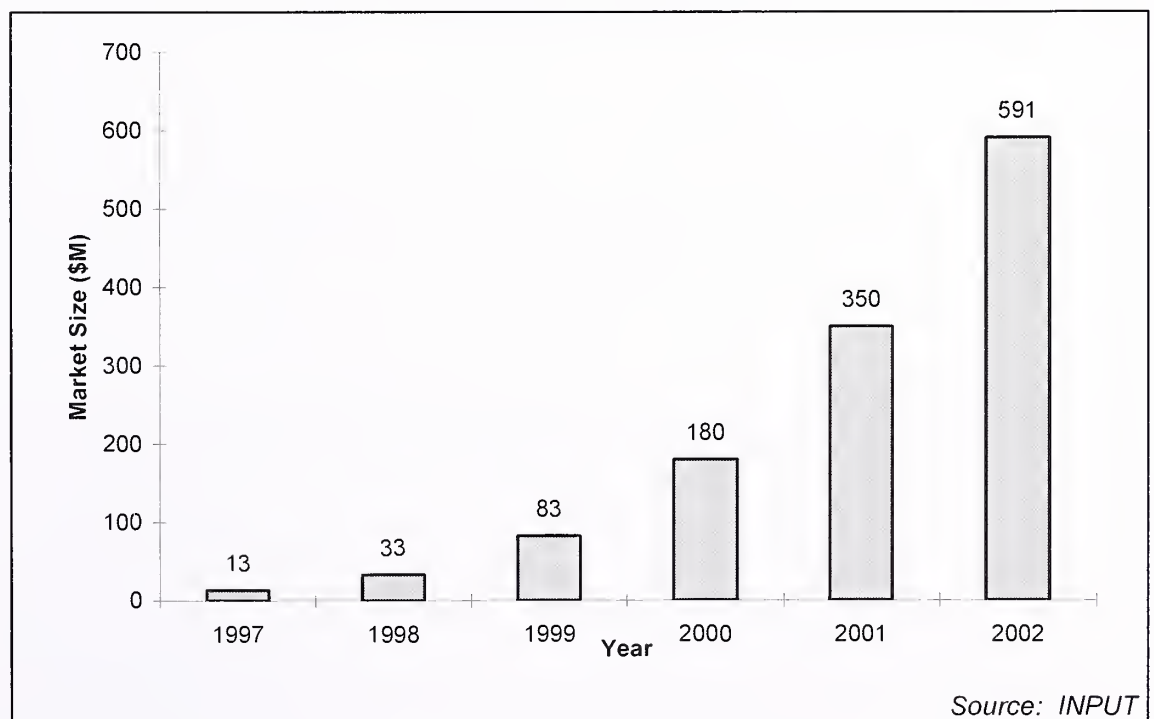
Internet/Intranet Market, 1997-2002: Brazil



3. Other Latin America

Exhibit VI-33

Internet/Intranet Market, 1997-2002: Other Latin America





Country Forecasts: by Delivery Mode

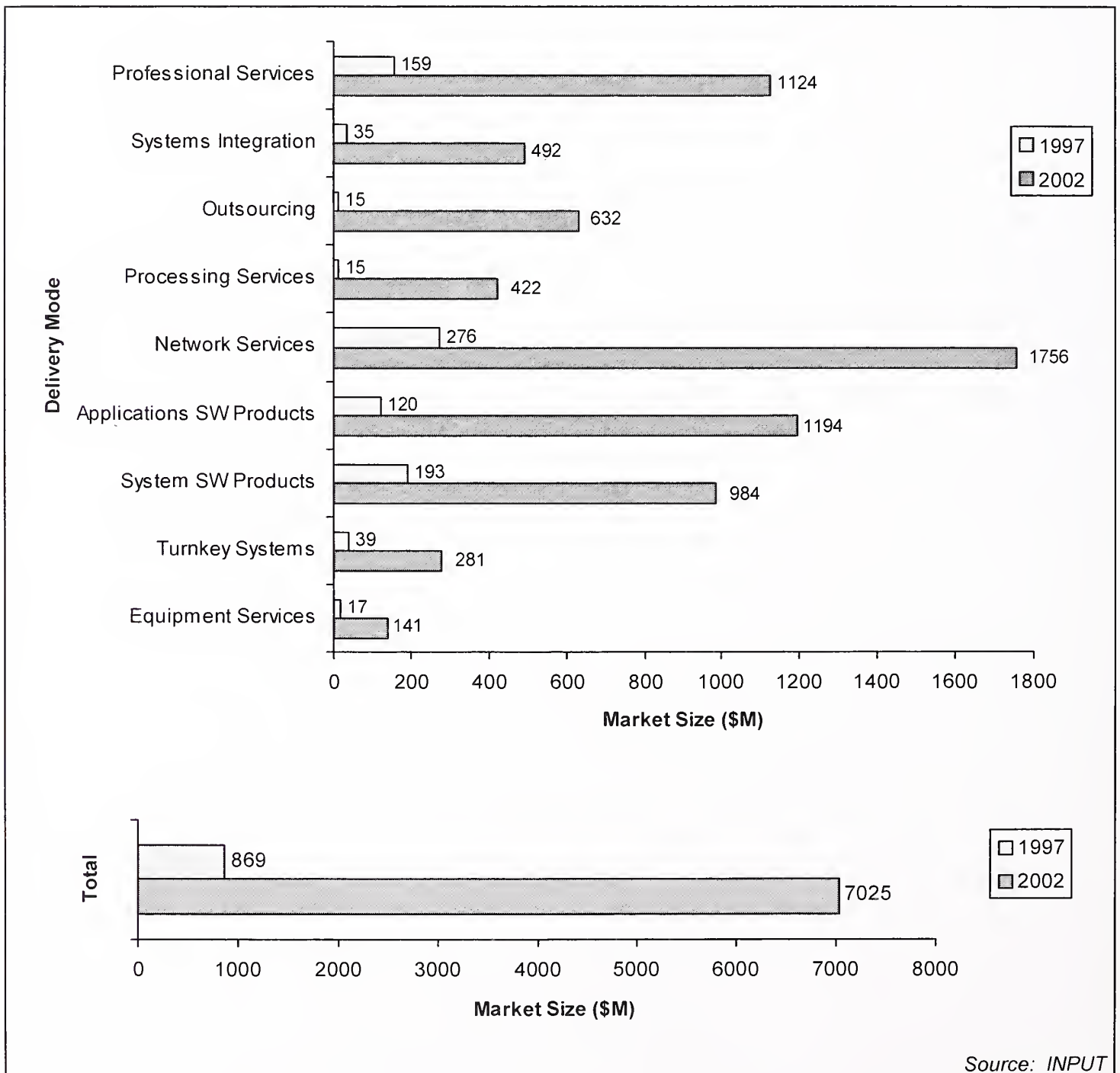
A

North America

1. Canada

Exhibit VII-1

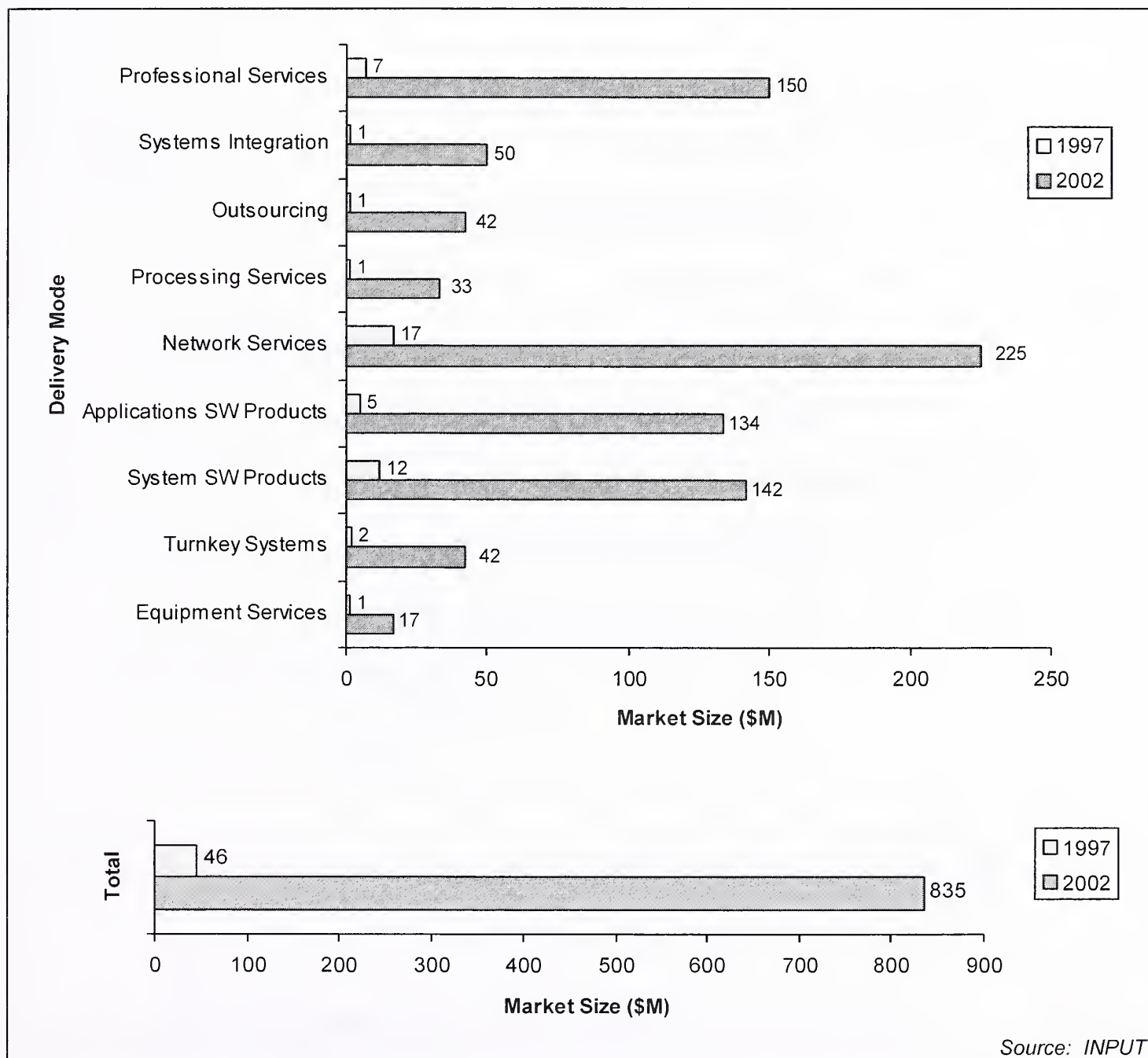
Internet/Intranet Market by Delivery Mode, 1997-2002: Canada



2. Mexico

Exhibit VII-2

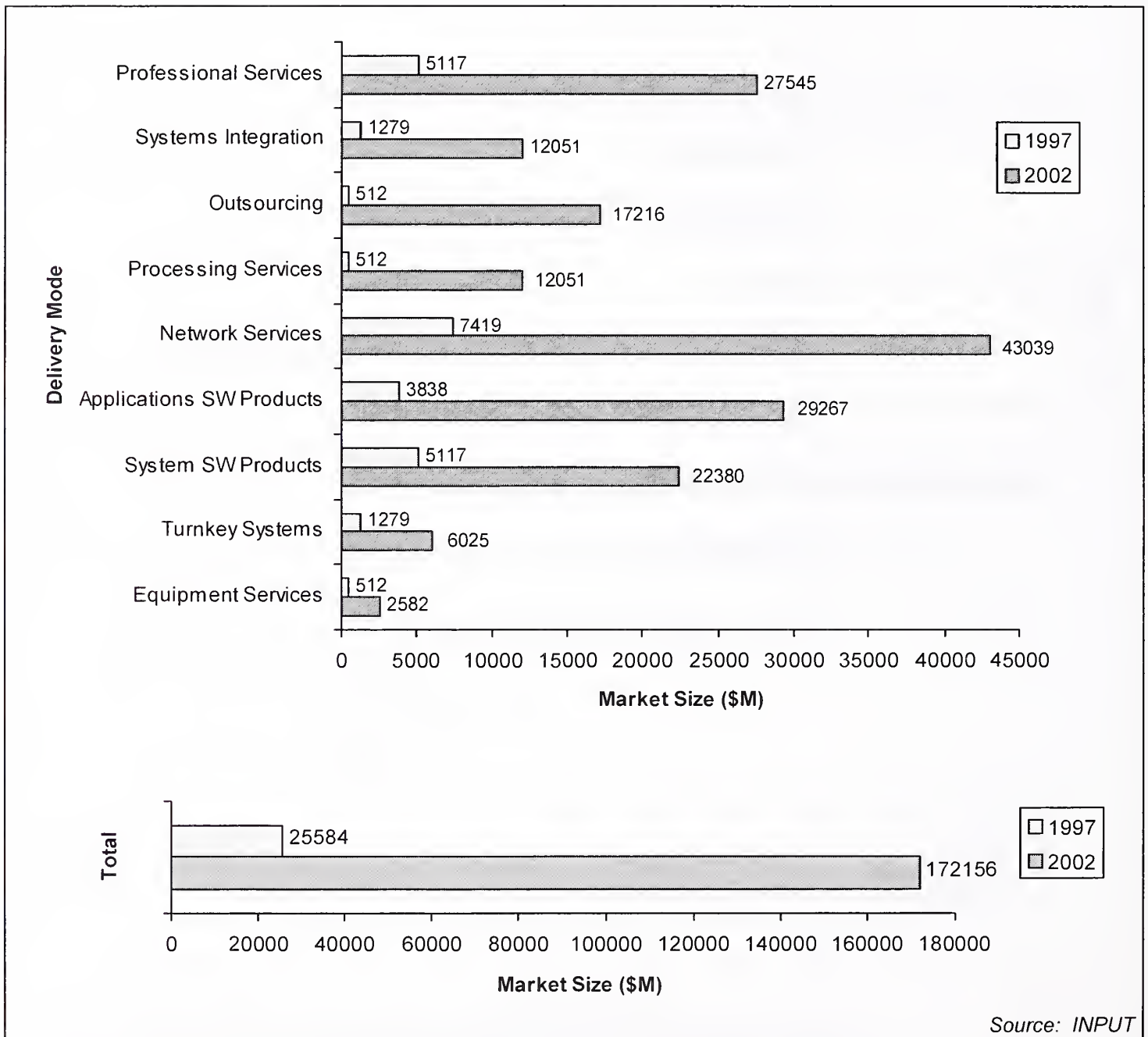
Internet/Intranet Market by Delivery Mode, 1997-2002: Mexico



3. USA

Exhibit VII-3

Internet/Intranet Market by Delivery Mode, 1997-2002: USA



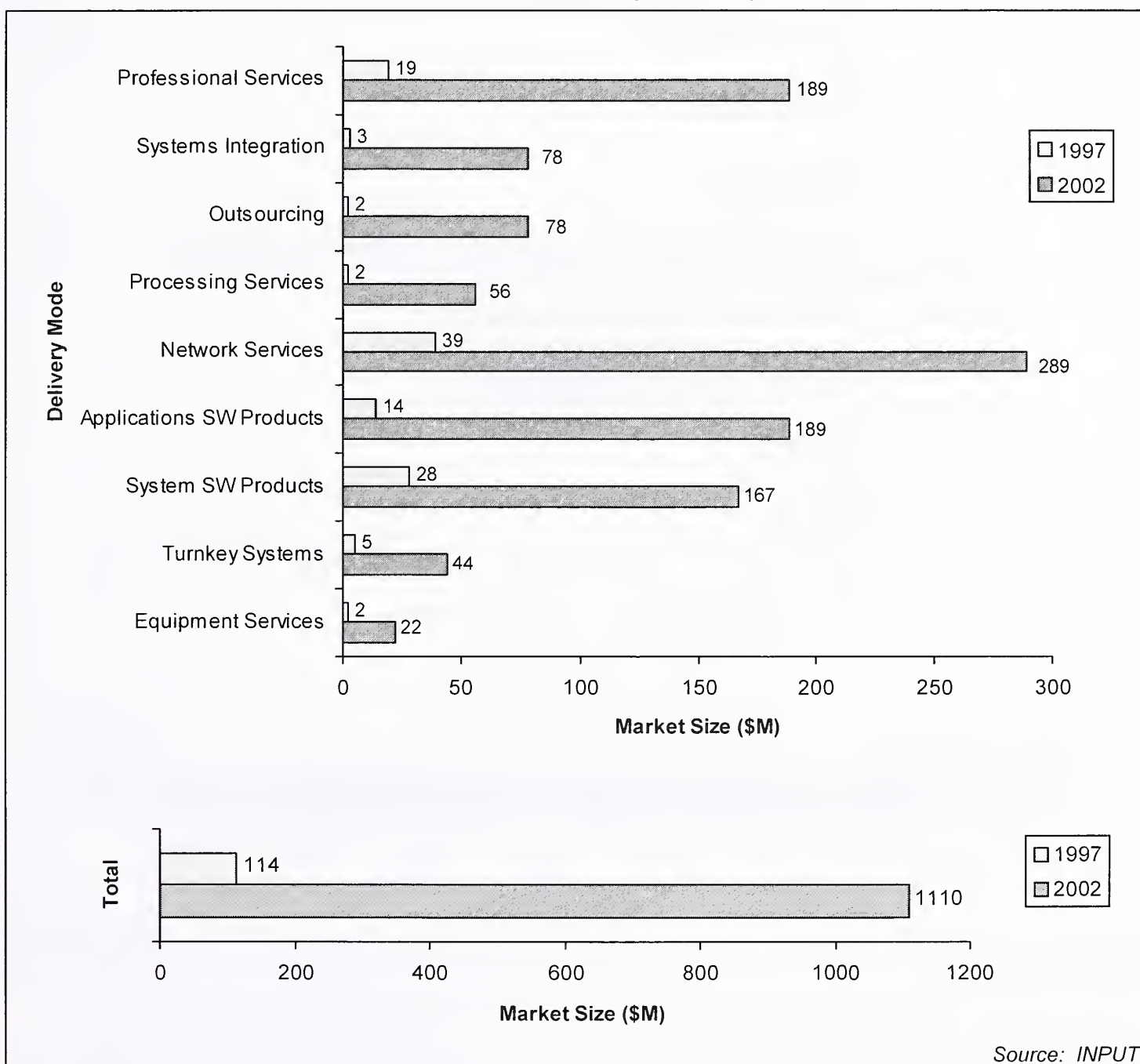
B

Europe

1. Austria

Exhibit VII-4

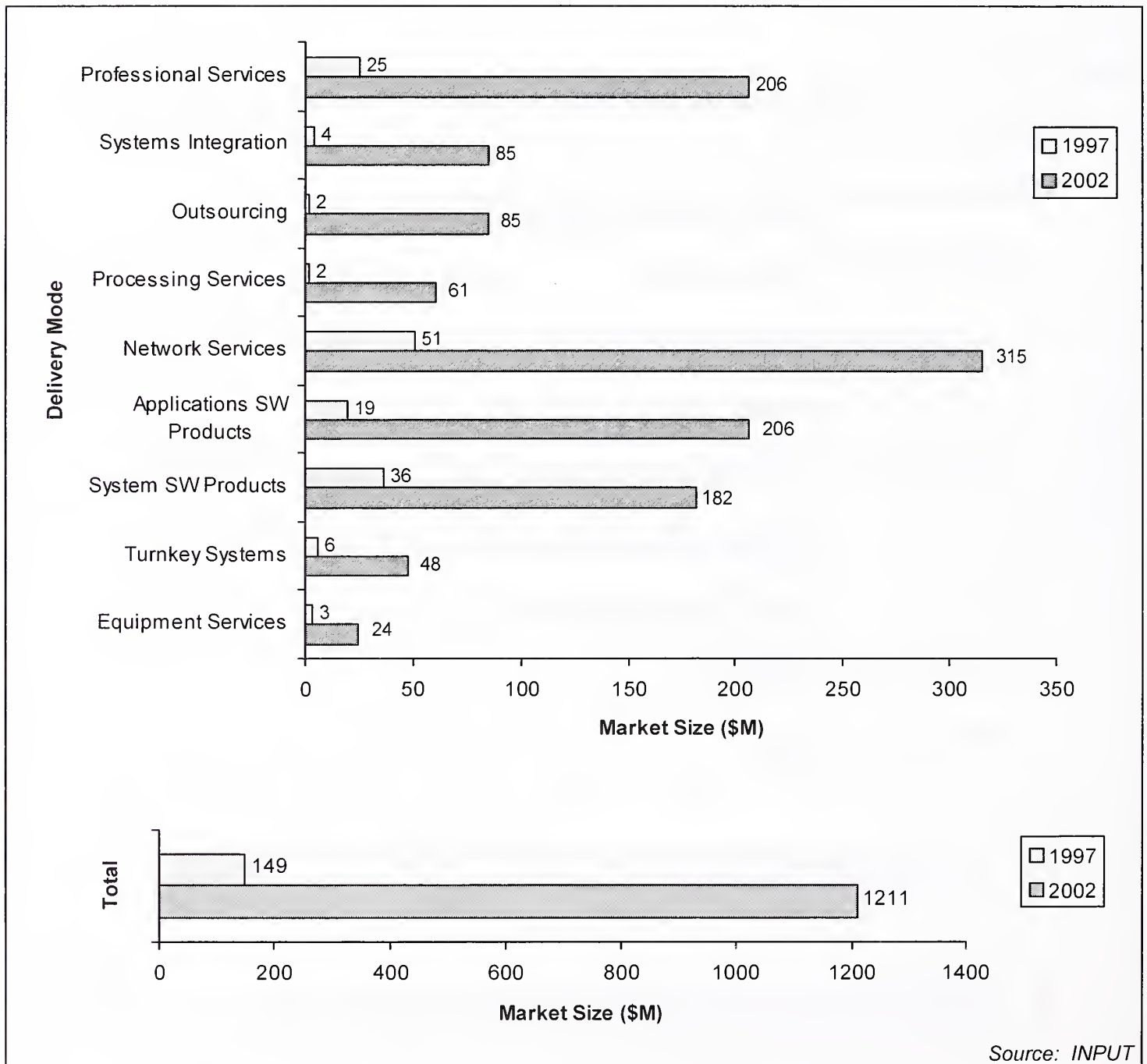
Internet/Intranet Market by Delivery Mode, 1997-2002: Austria



2. Belgium

Exhibit VII-5

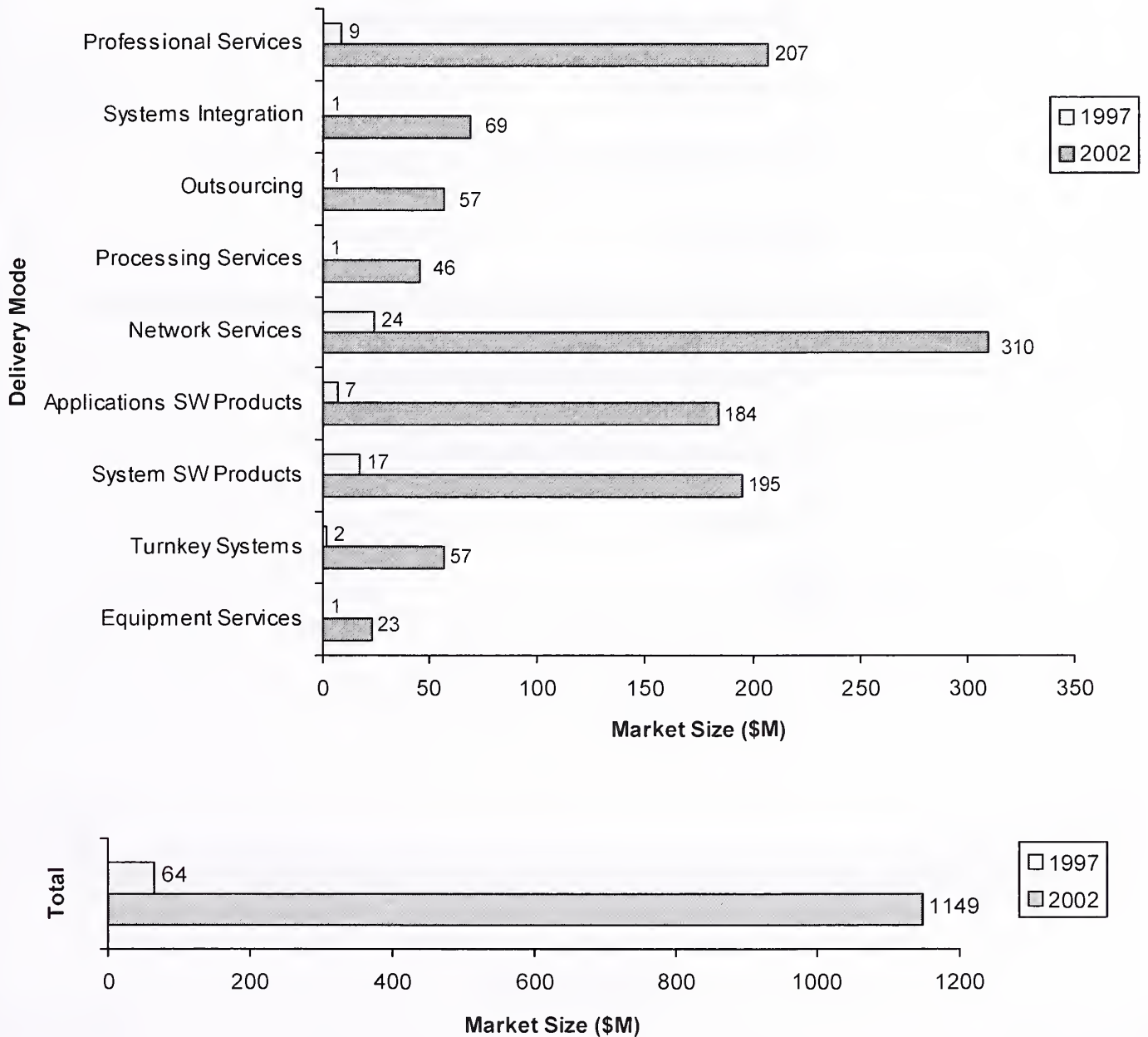
Internet/Intranet Market by Delivery Mode, 1997-2002: Belgium



3. Central & Eastern Europe

Exhibit VII-6

Internet/Intranet Market by Delivery Mode, 1997-2002: Central & Eastern Europe

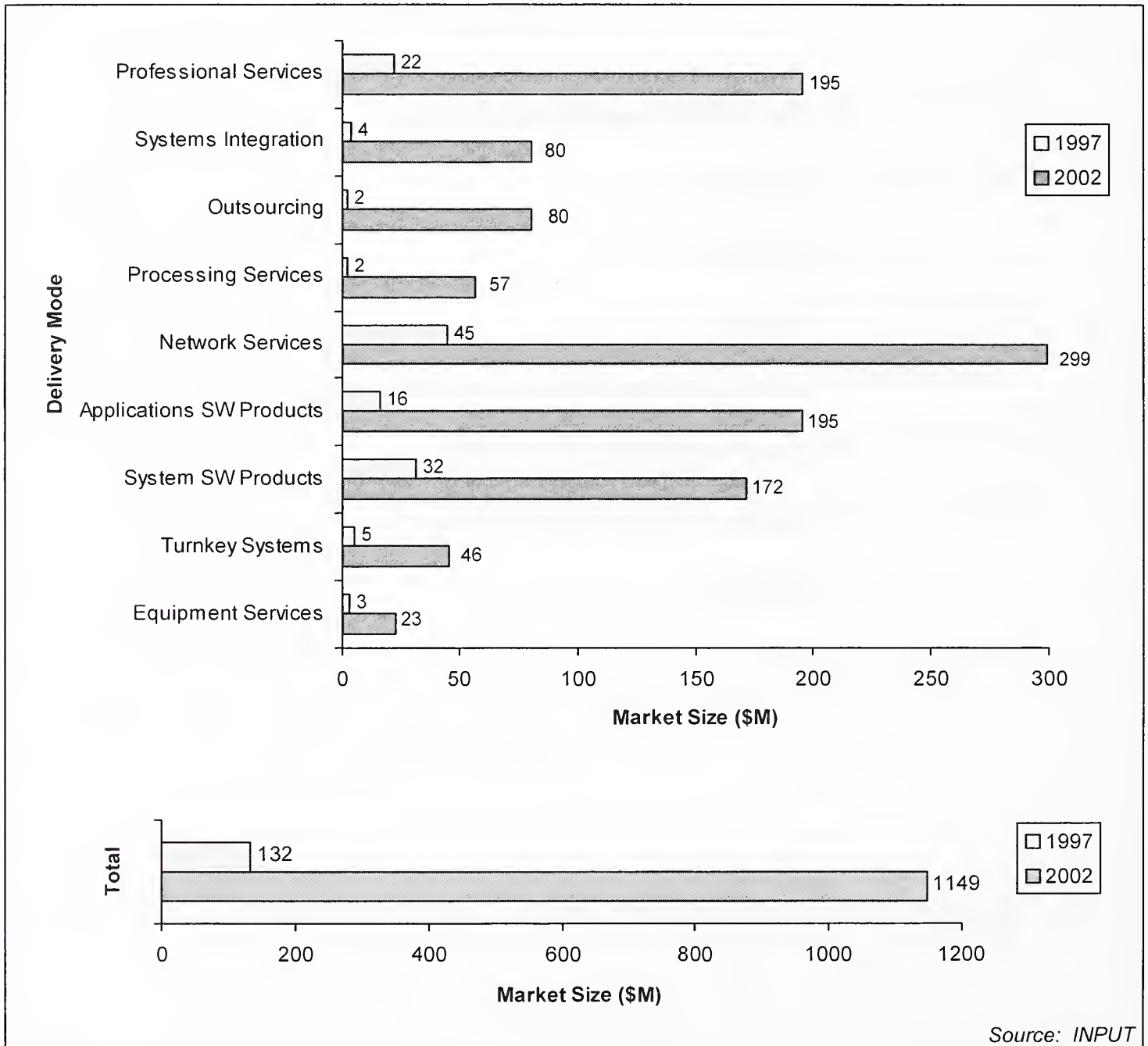


Source: INPUT

4. Denmark

Exhibit VII-7

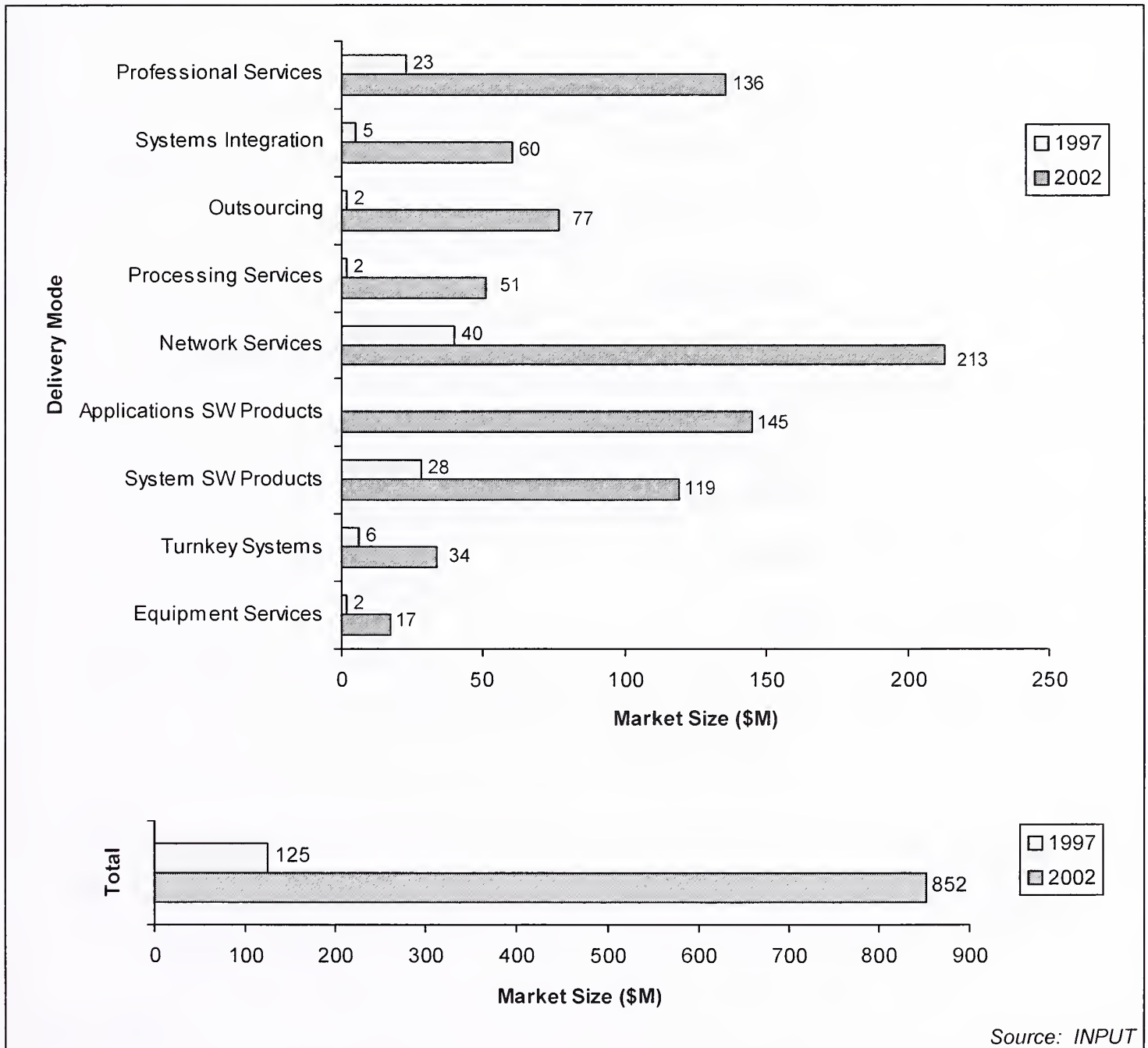
Internet/Intranet Market by Delivery Mode, 1997-2002: Denmark



5. Finland

Exhibit VII-8

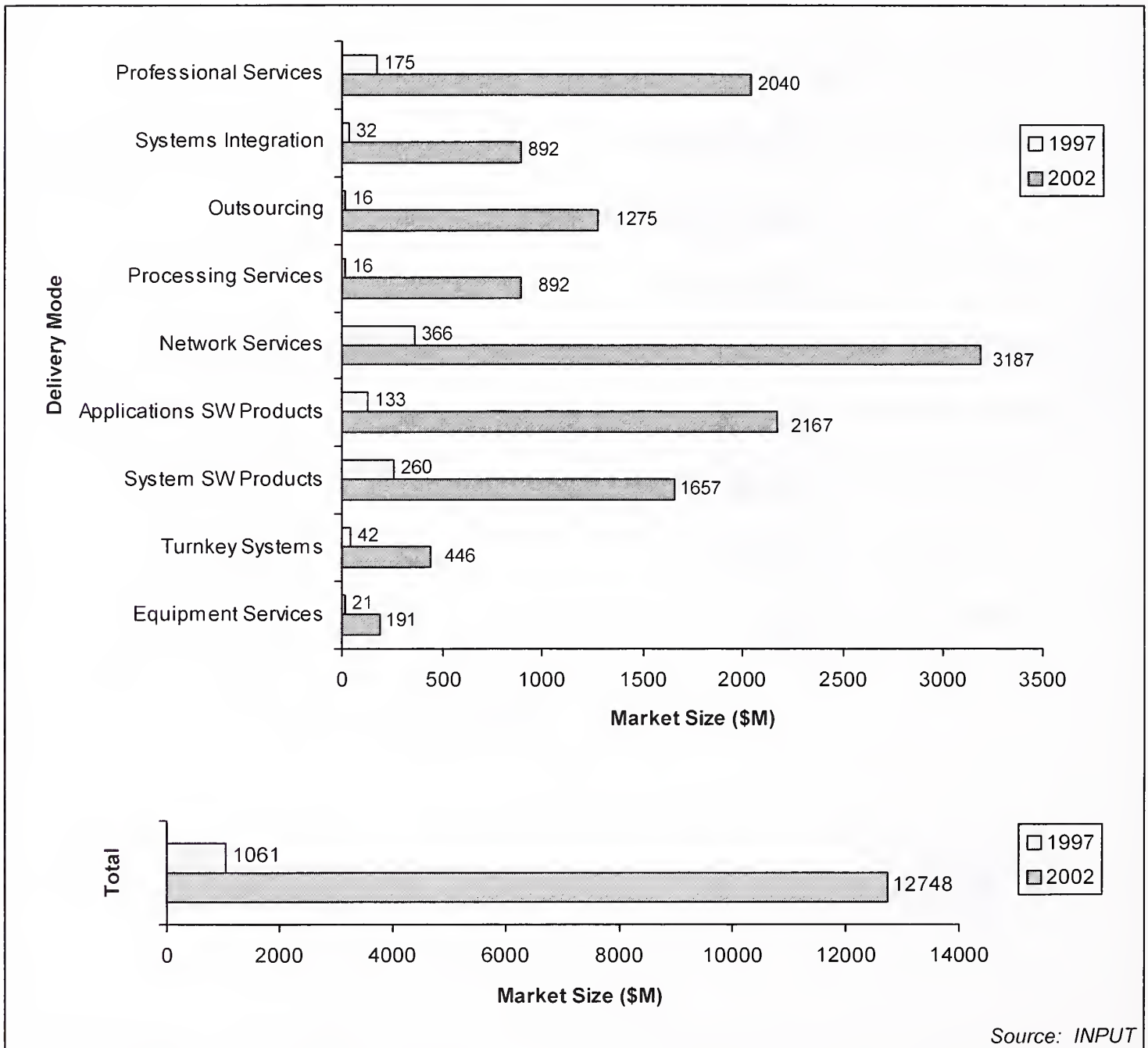
Internet/Intranet Market by Delivery Mode, 1997-2002: Finland



6. France

Exhibit VII-9

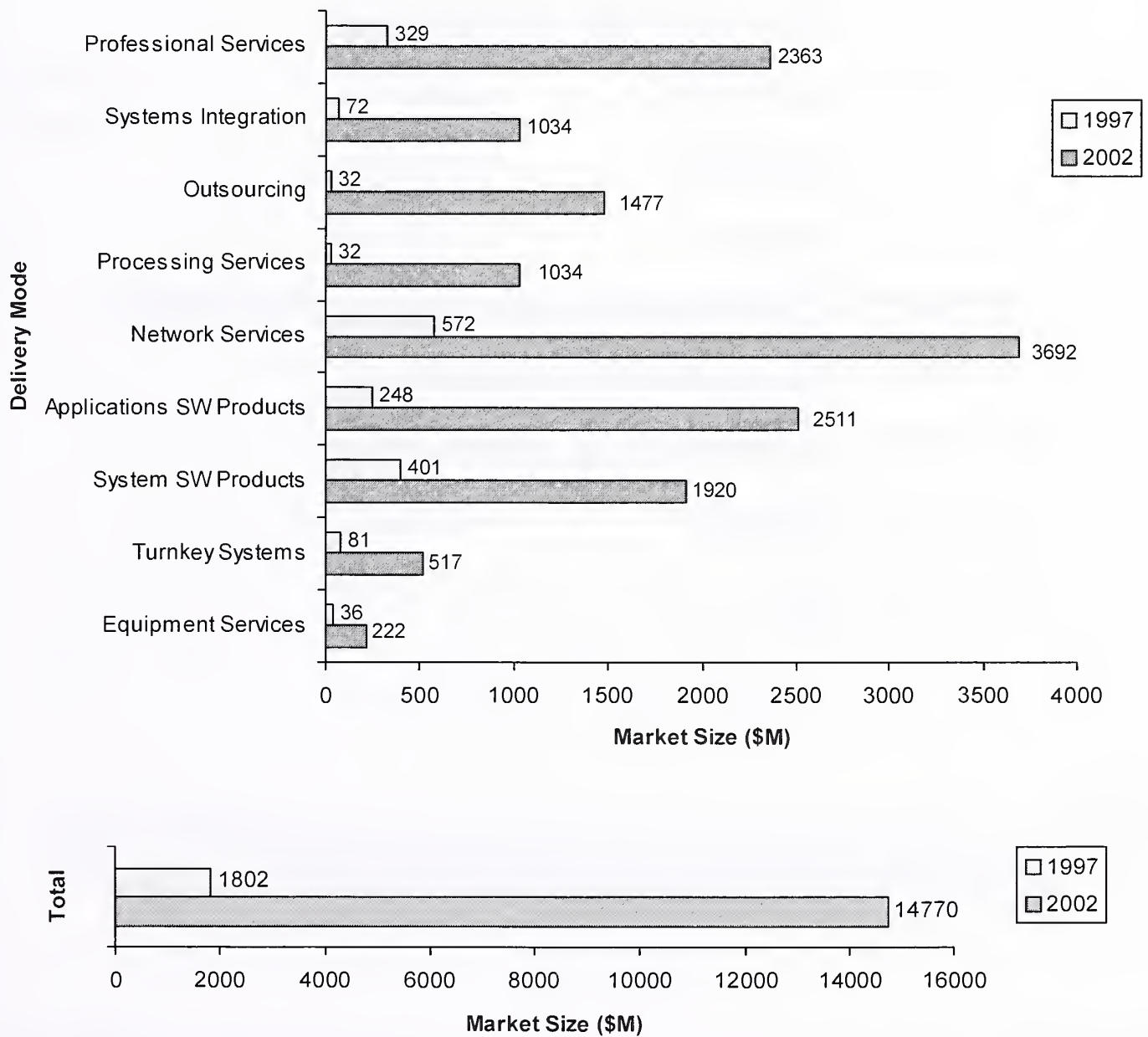
Internet/Intranet Market by Delivery Mode, 1997-2002: France



7. Germany

Exhibit VII-10

Internet/Intranet Market by Delivery Mode, 1997-2002: Germany

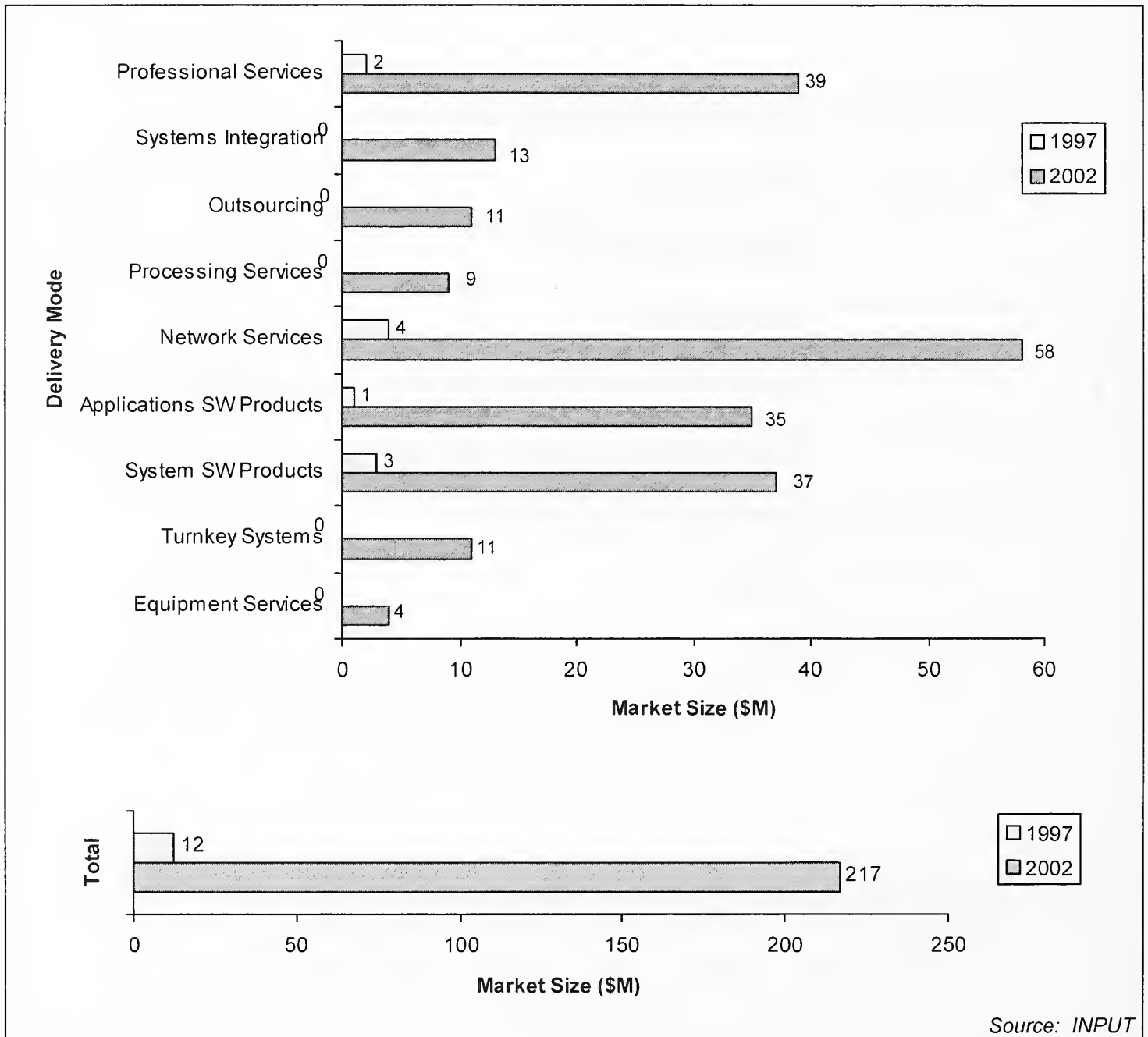


Source: INPUT

8. Greece

Exhibit VII-11

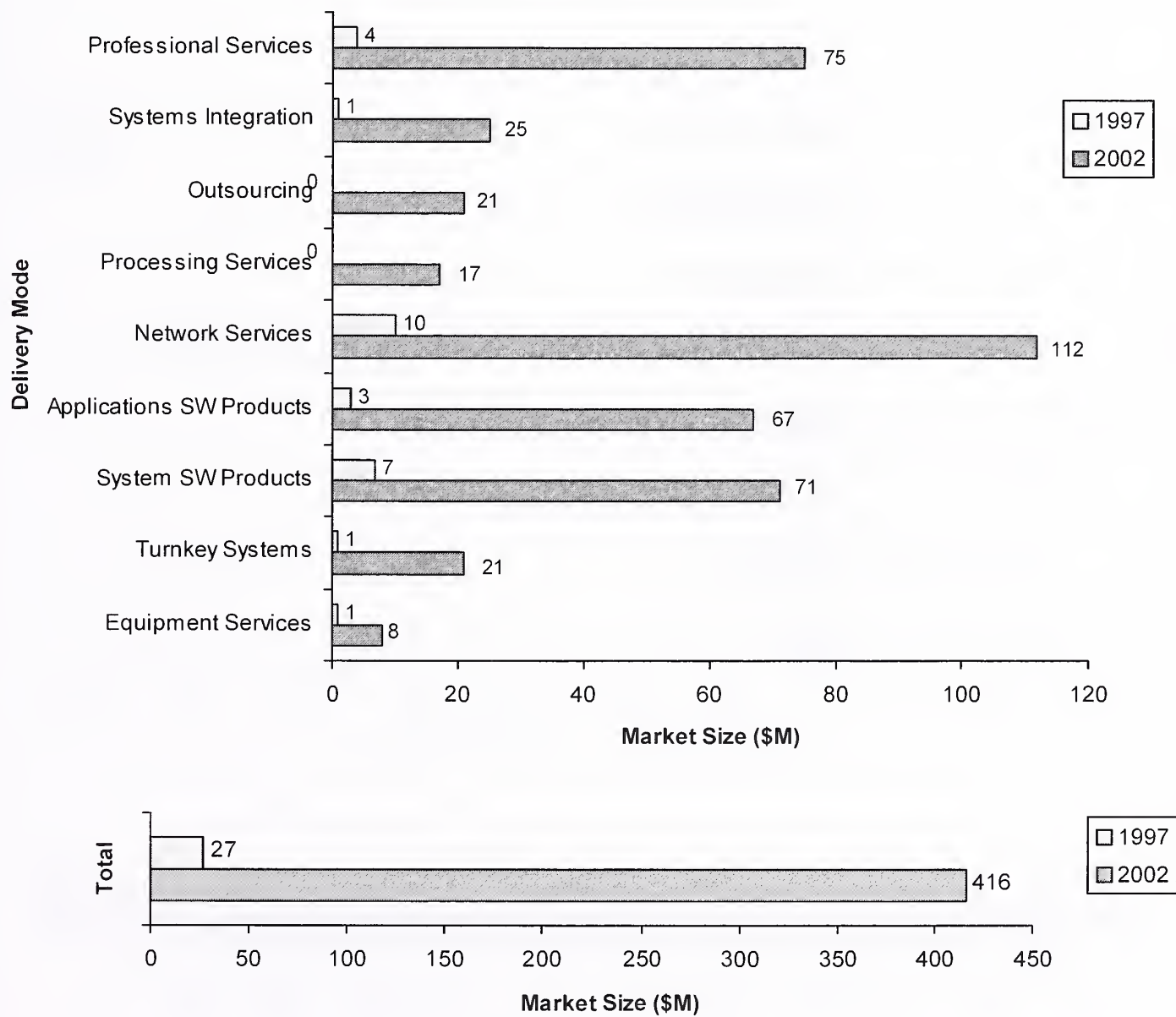
Internet/Intranet Market by Delivery Mode, 1997-2002: Greece



9. Ireland

Exhibit VII-12

Internet/Intranet Market by Delivery Mode, 1997-2002: Ireland

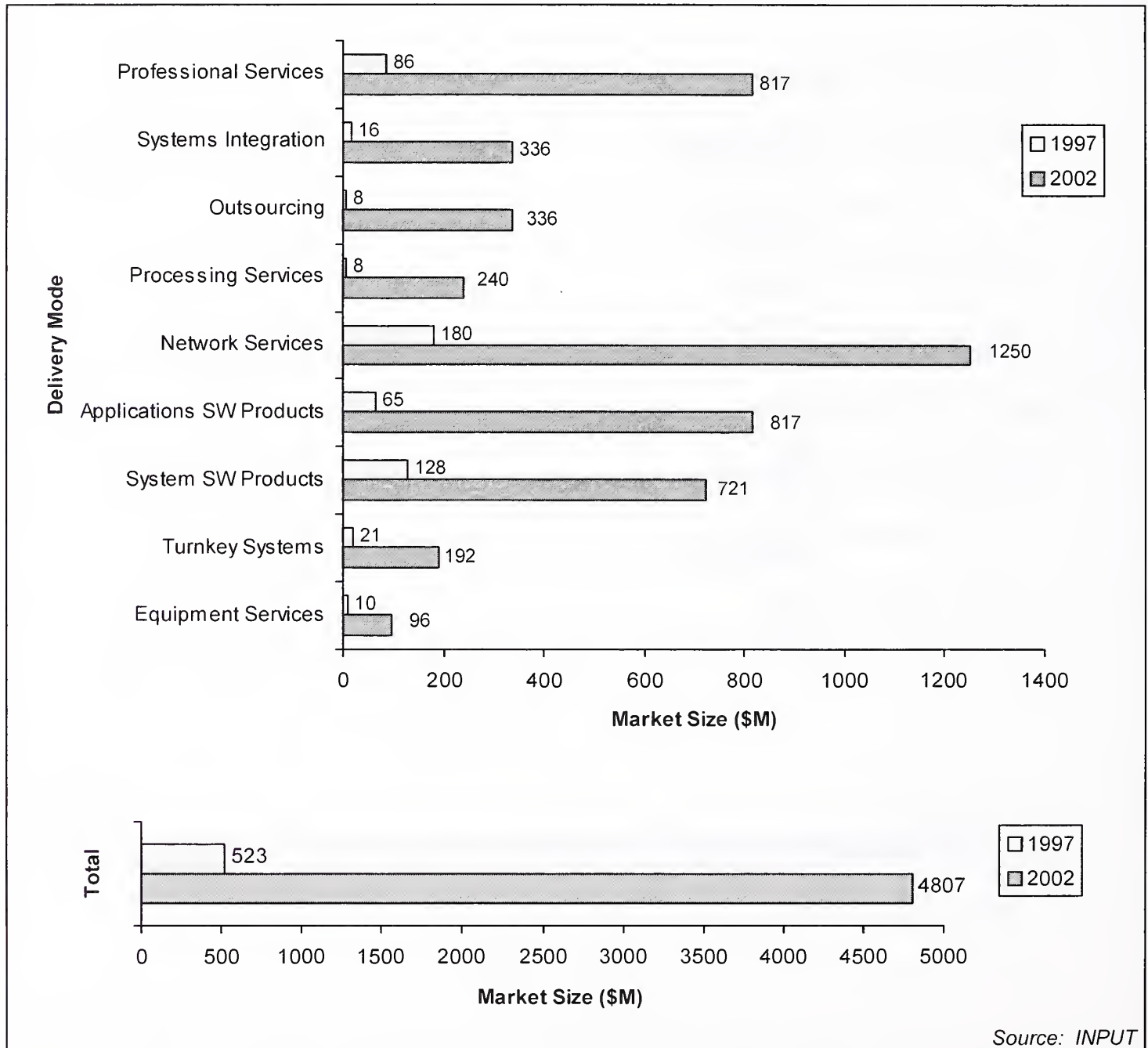


Source: INPUT

10. Italy

Exhibit VII-13

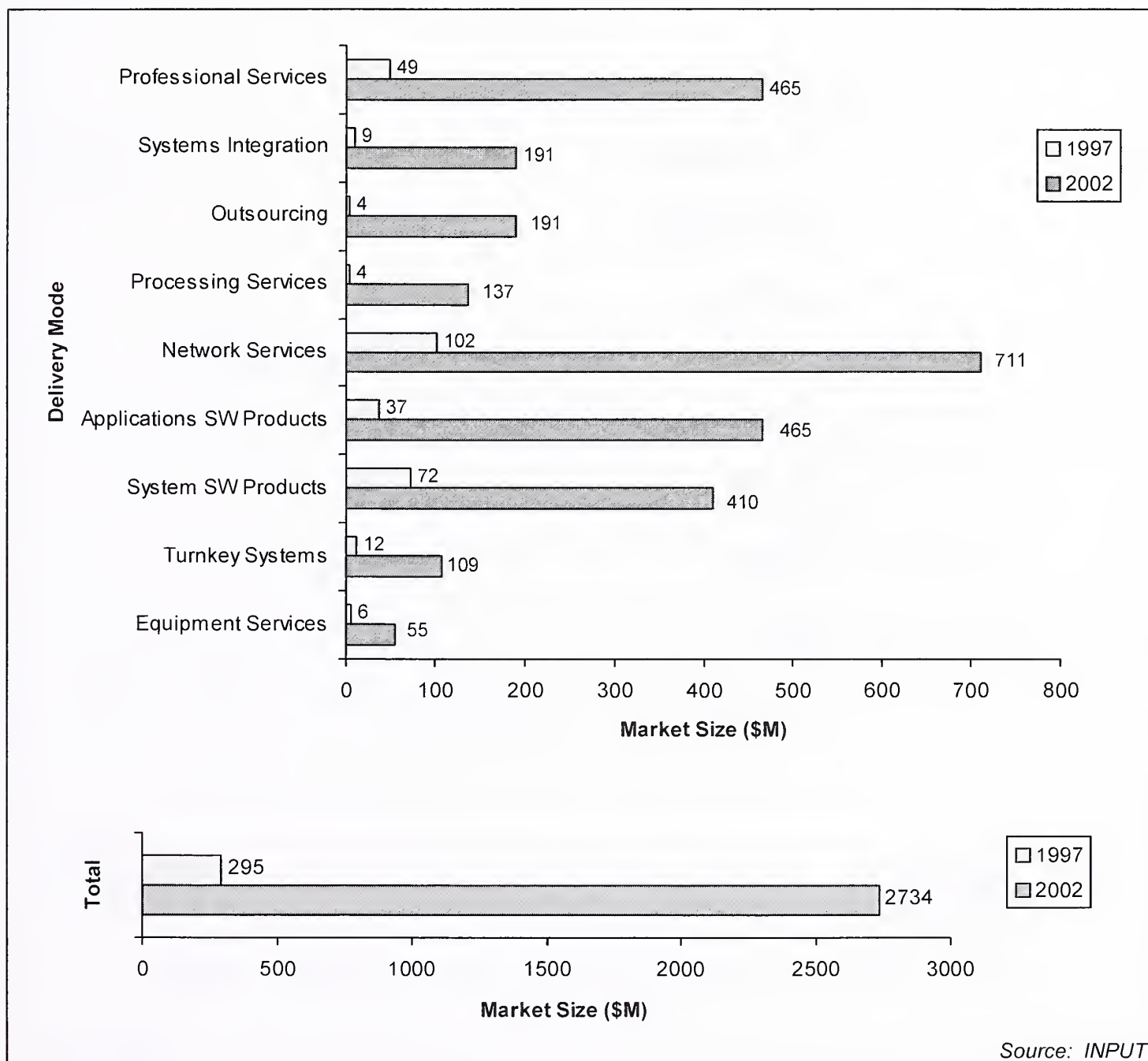
Internet/Intranet Market by Delivery Mode, 1997-2002: Italy



11. Netherlands

Exhibit VII-14

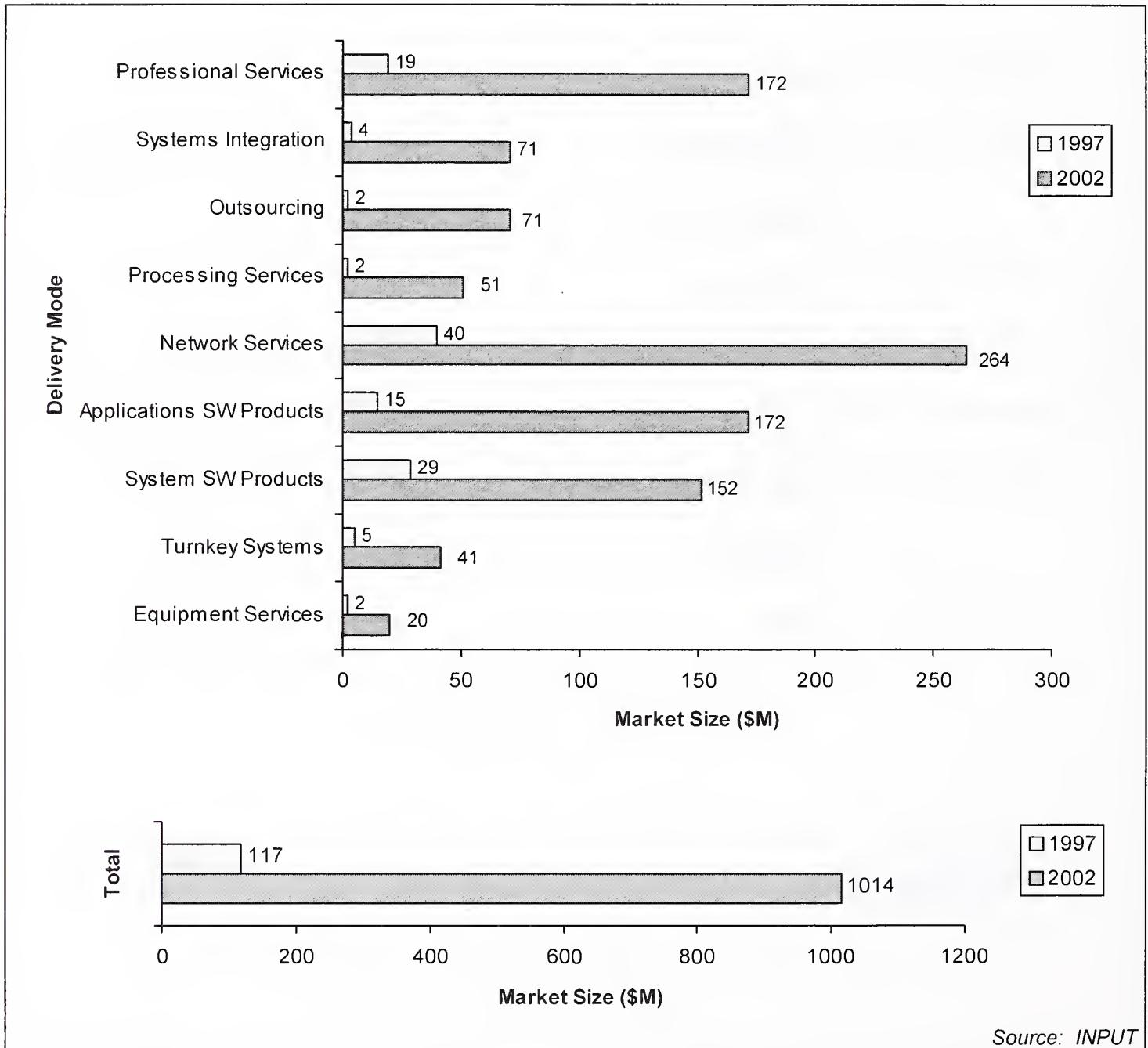
Internet/Intranet Market by Delivery Mode, 1997-2002: Netherlands



12. Norway

Exhibit VII-15

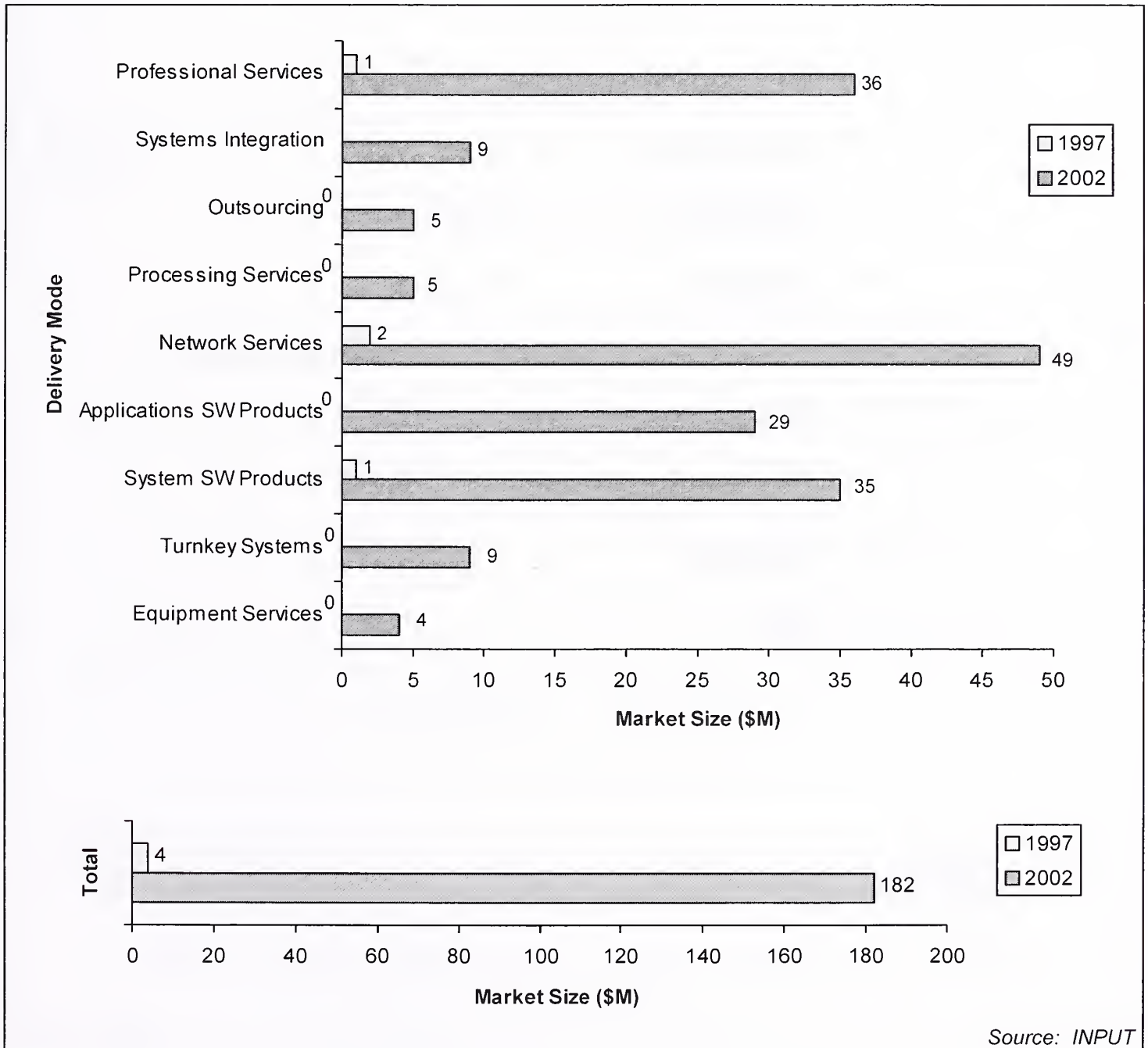
Internet/Intranet Market by Delivery Mode, 1997-2002: Norway



13. Portugal

Exhibit VII-16

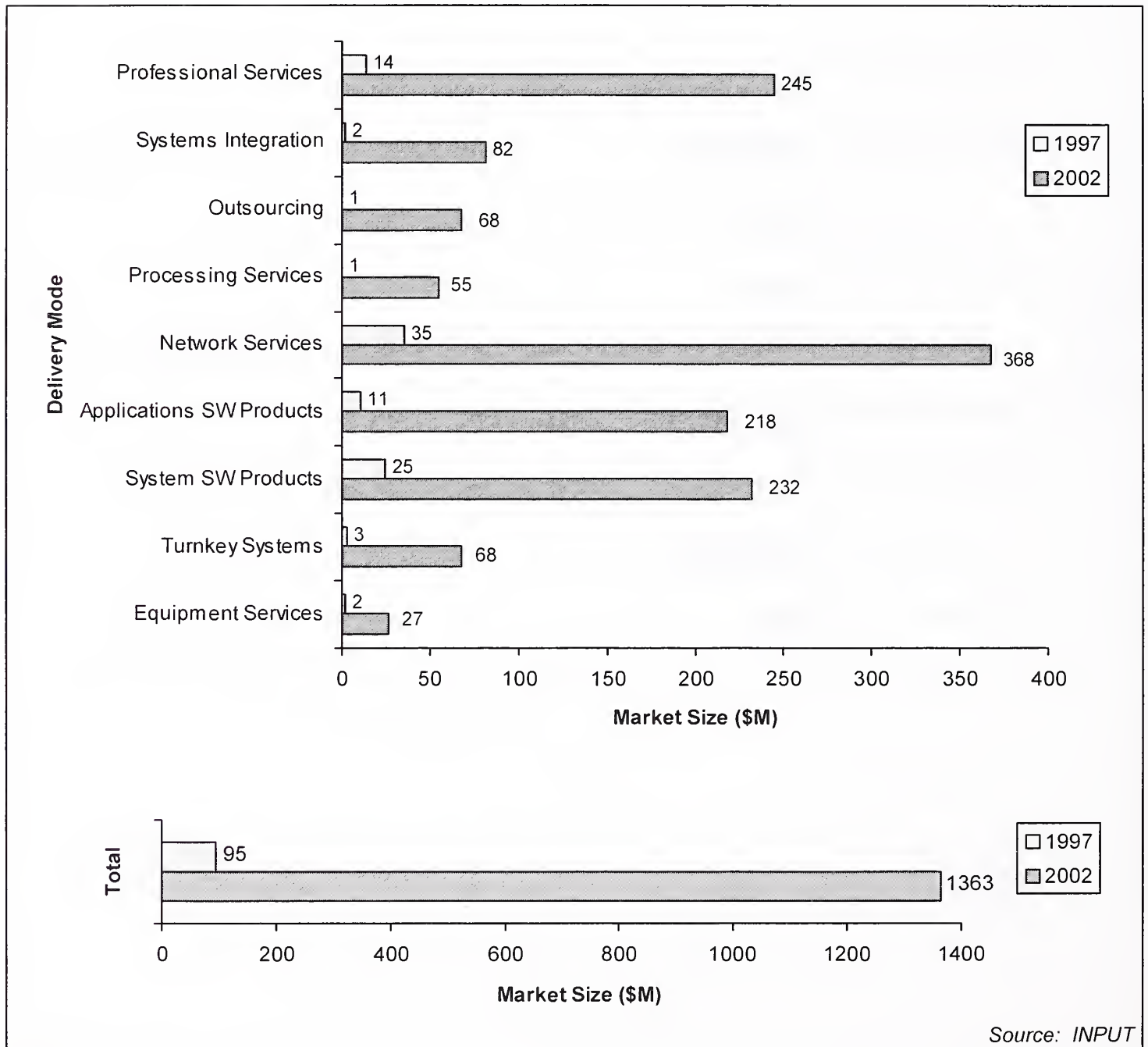
Internet/Intranet Market by Delivery Mode, 1997-2002: Portugal



14. Spain

Exhibit VII-17

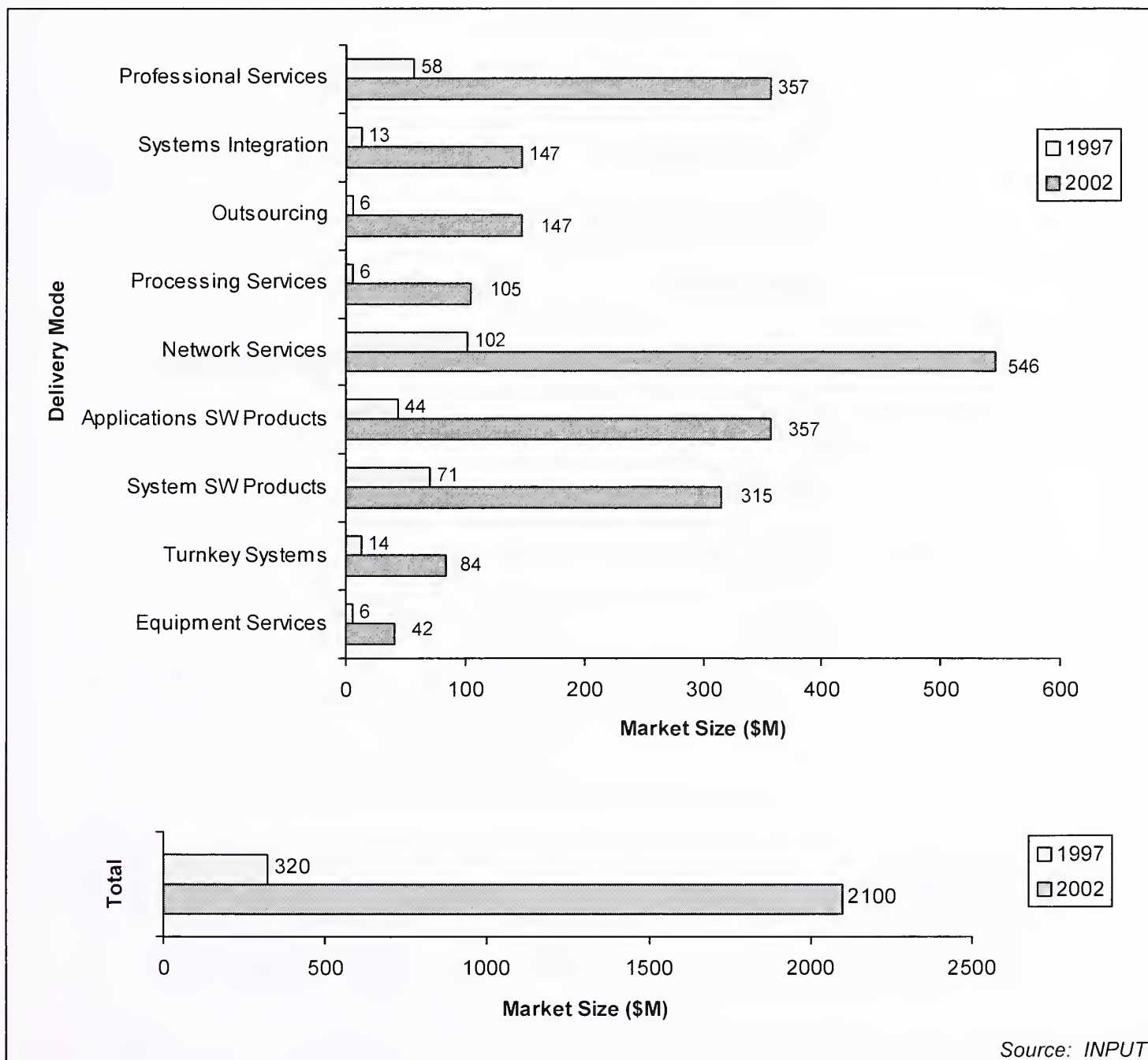
Internet/Intranet Market by Delivery Mode, 1997-2002: Spain



15. Sweden

Exhibit VII-18

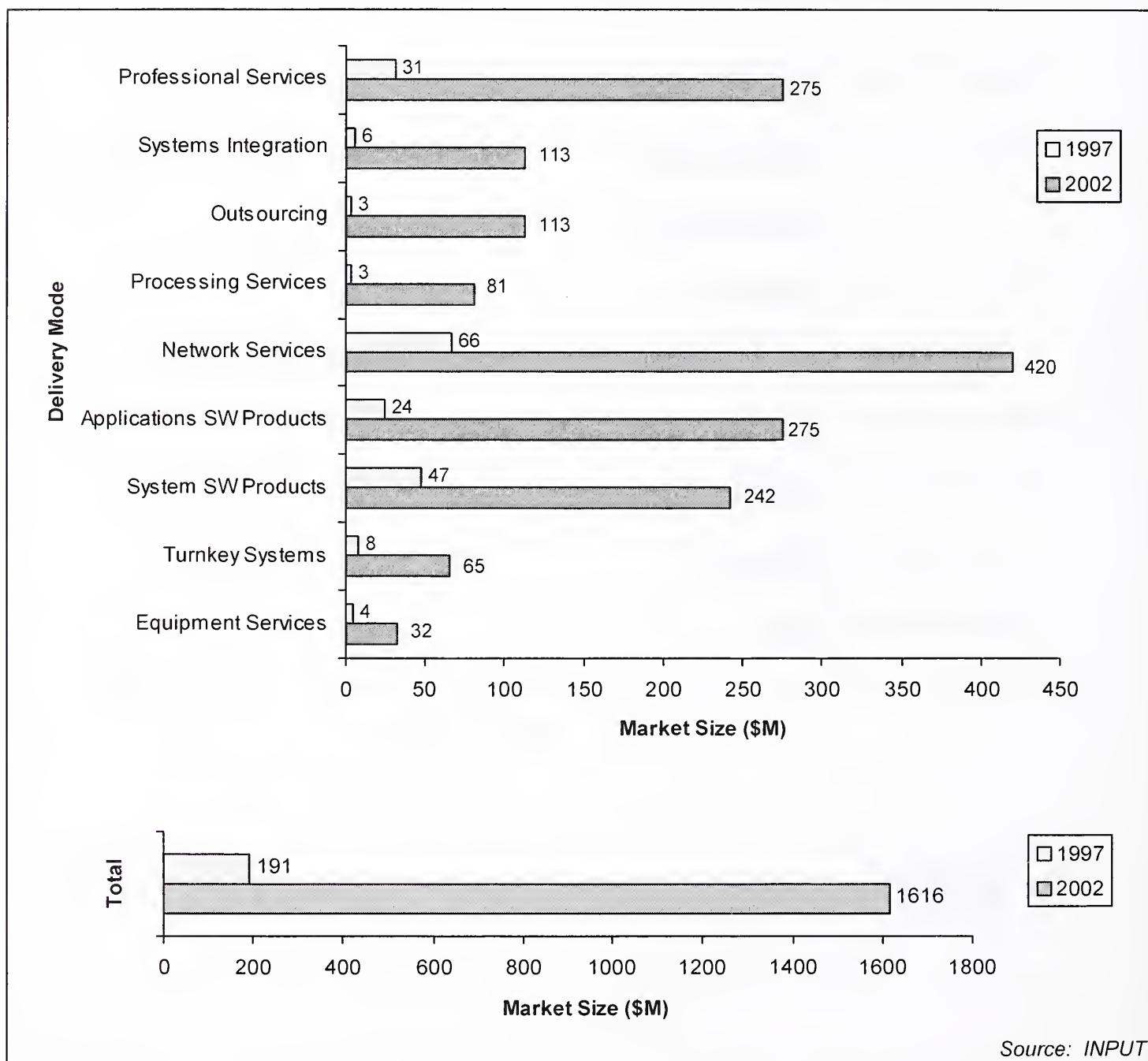
Internet/Intranet Market by Delivery Mode, 1997-2002: Sweden



16. Switzerland

Exhibit VII-19

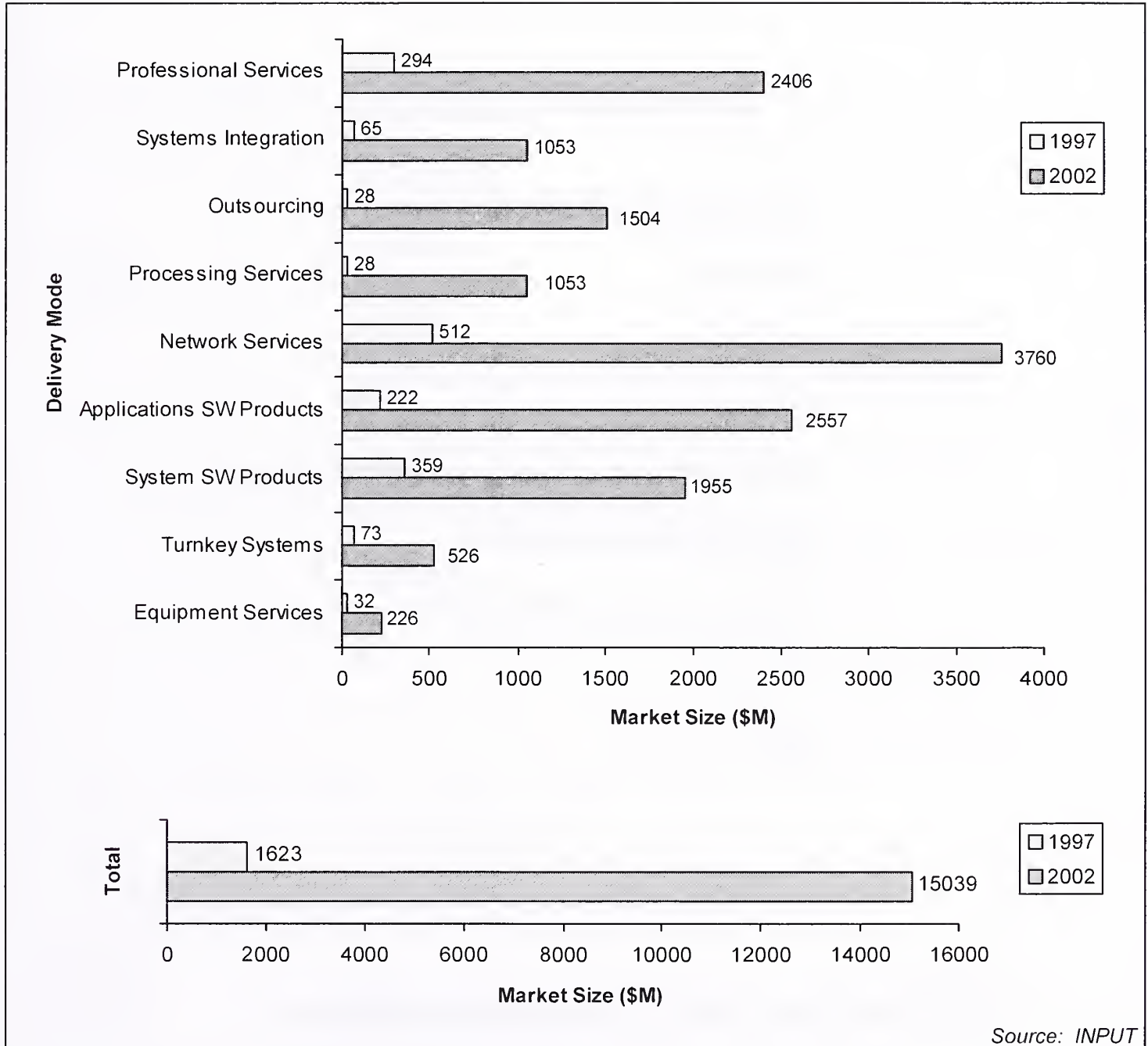
Internet/Intranet Market by Delivery Mode, 1997-2002: Switzerland



17. UK

Exhibit VII-20

Internet/Intranet Market by Delivery Mode, 1997-2002: UK



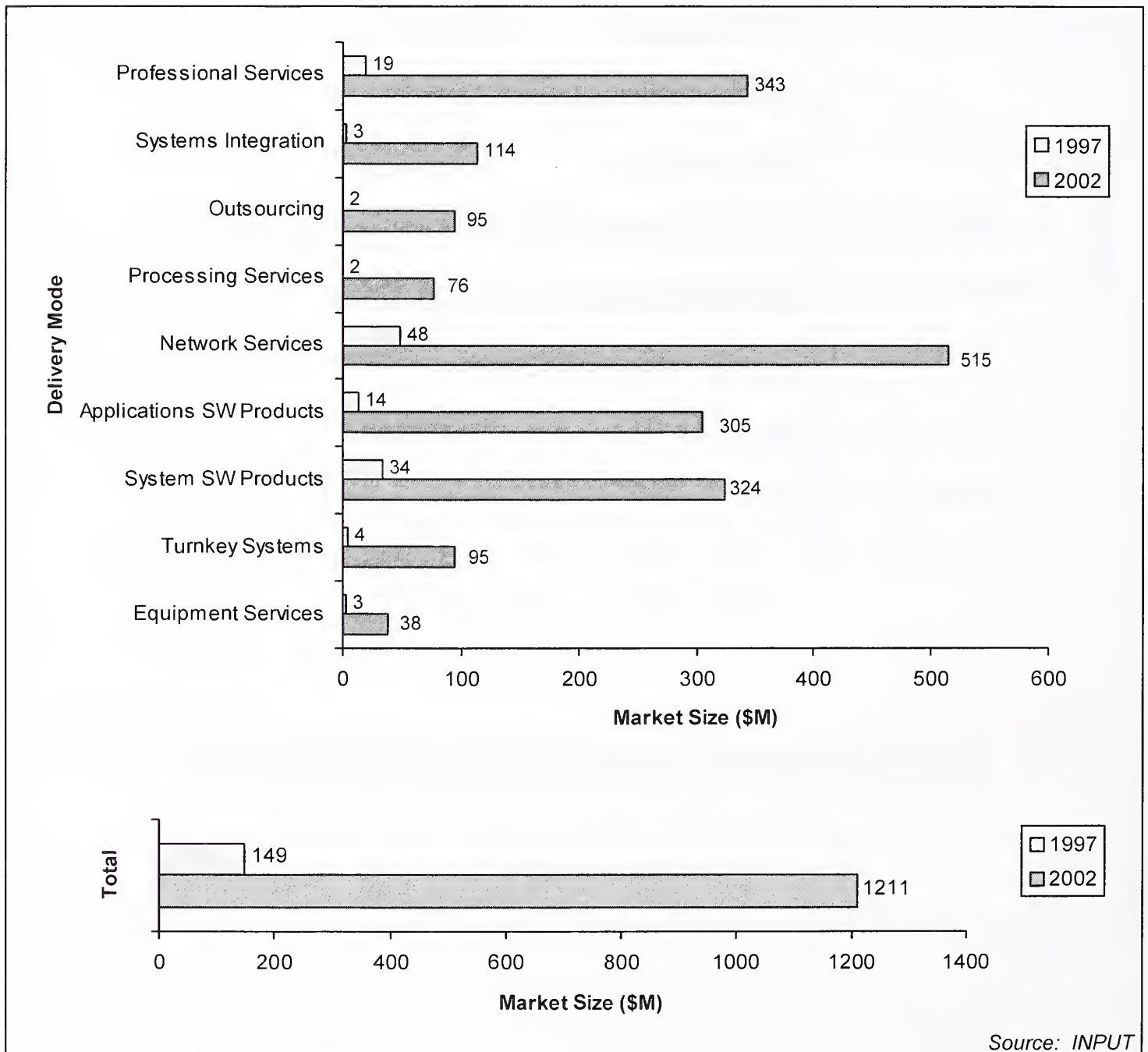
C

Asia-Pacific

1. Australia

Exhibit VII-21

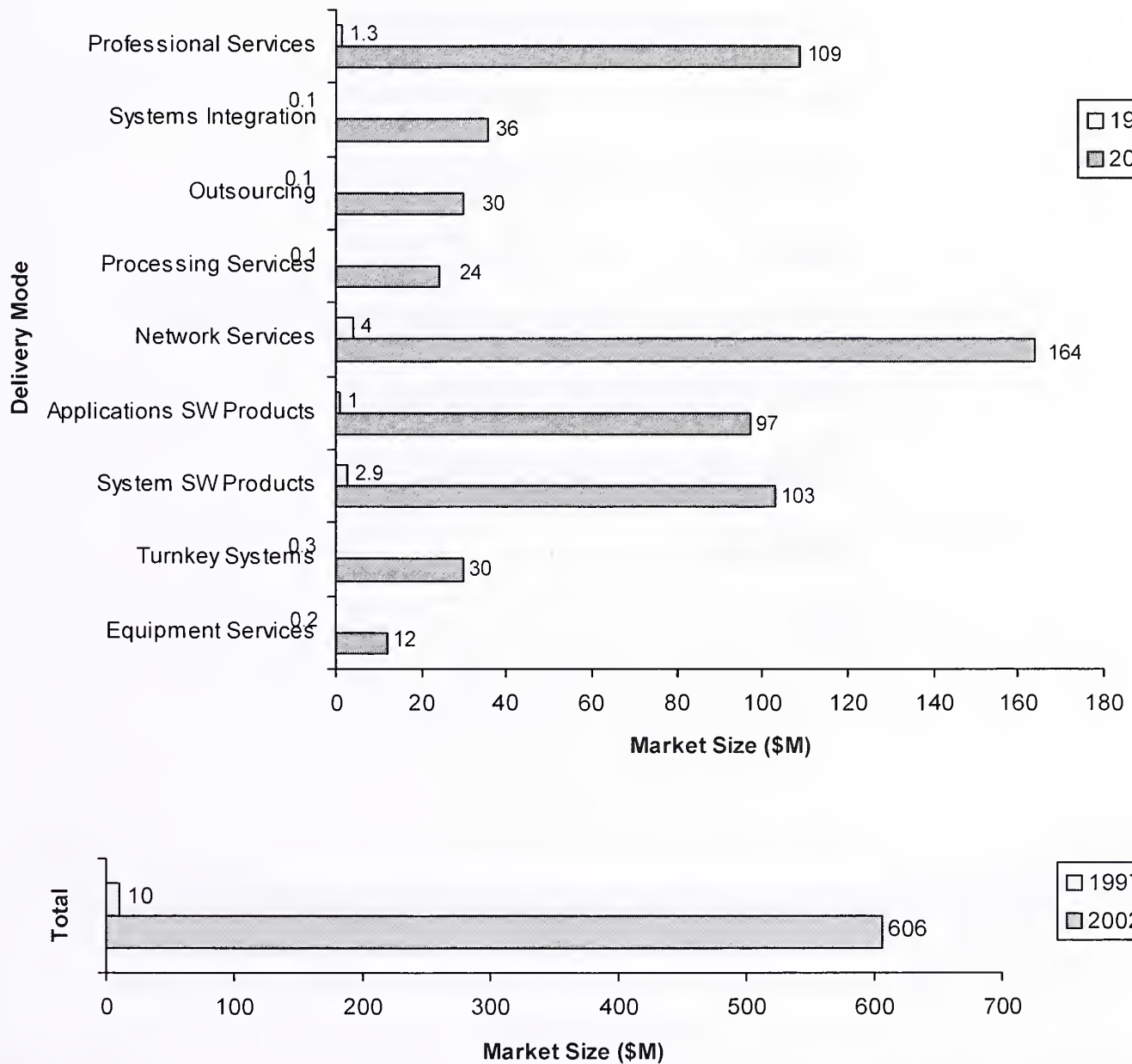
Internet/Intranet Market by Delivery Mode, 1997-2002: Australia



2. China

Exhibit VII-22

Internet/Intranet Market by Delivery Mode, 1997-2002: China

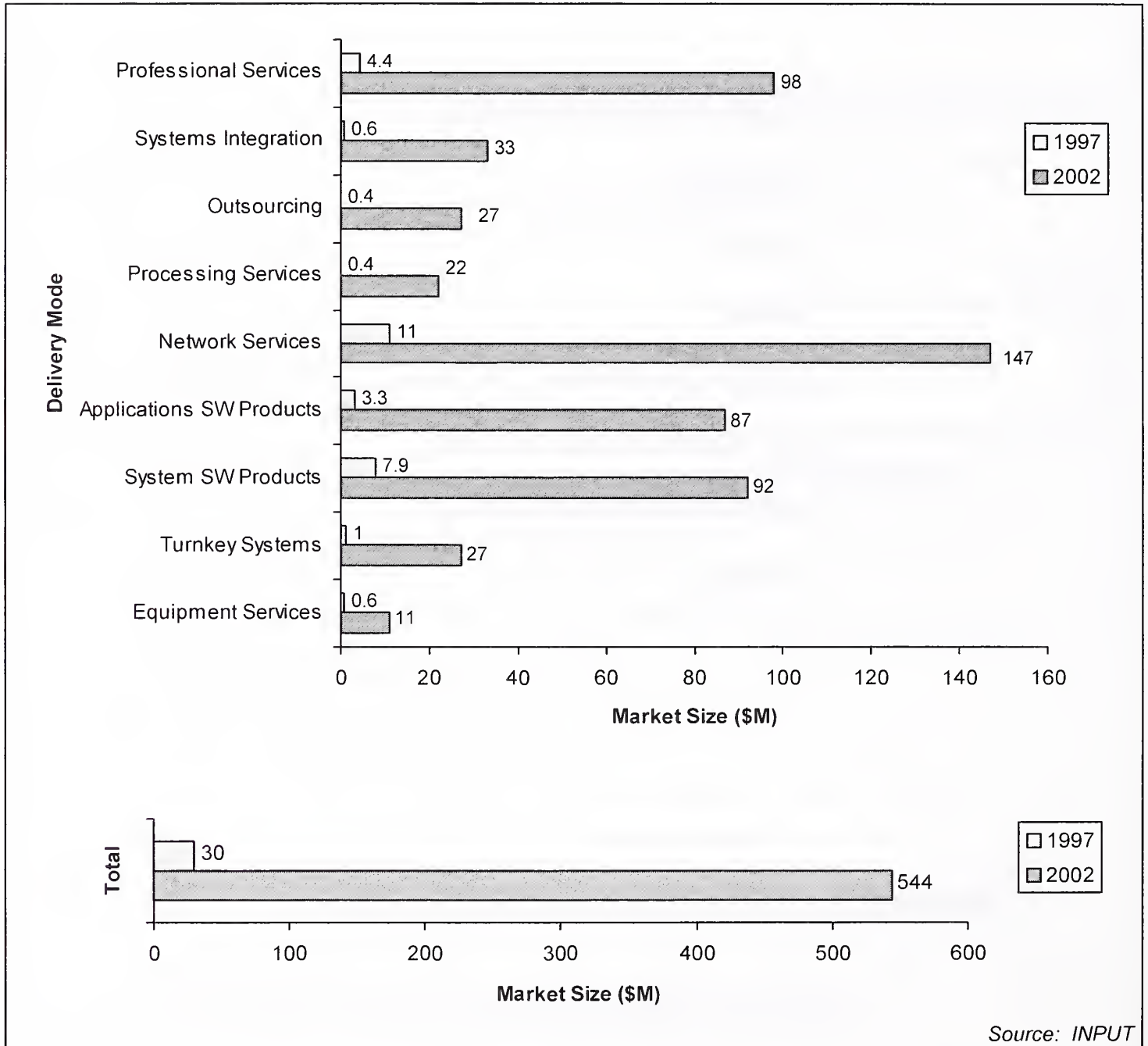


Source: INPUT

3. Hong Kong

Exhibit VII-23

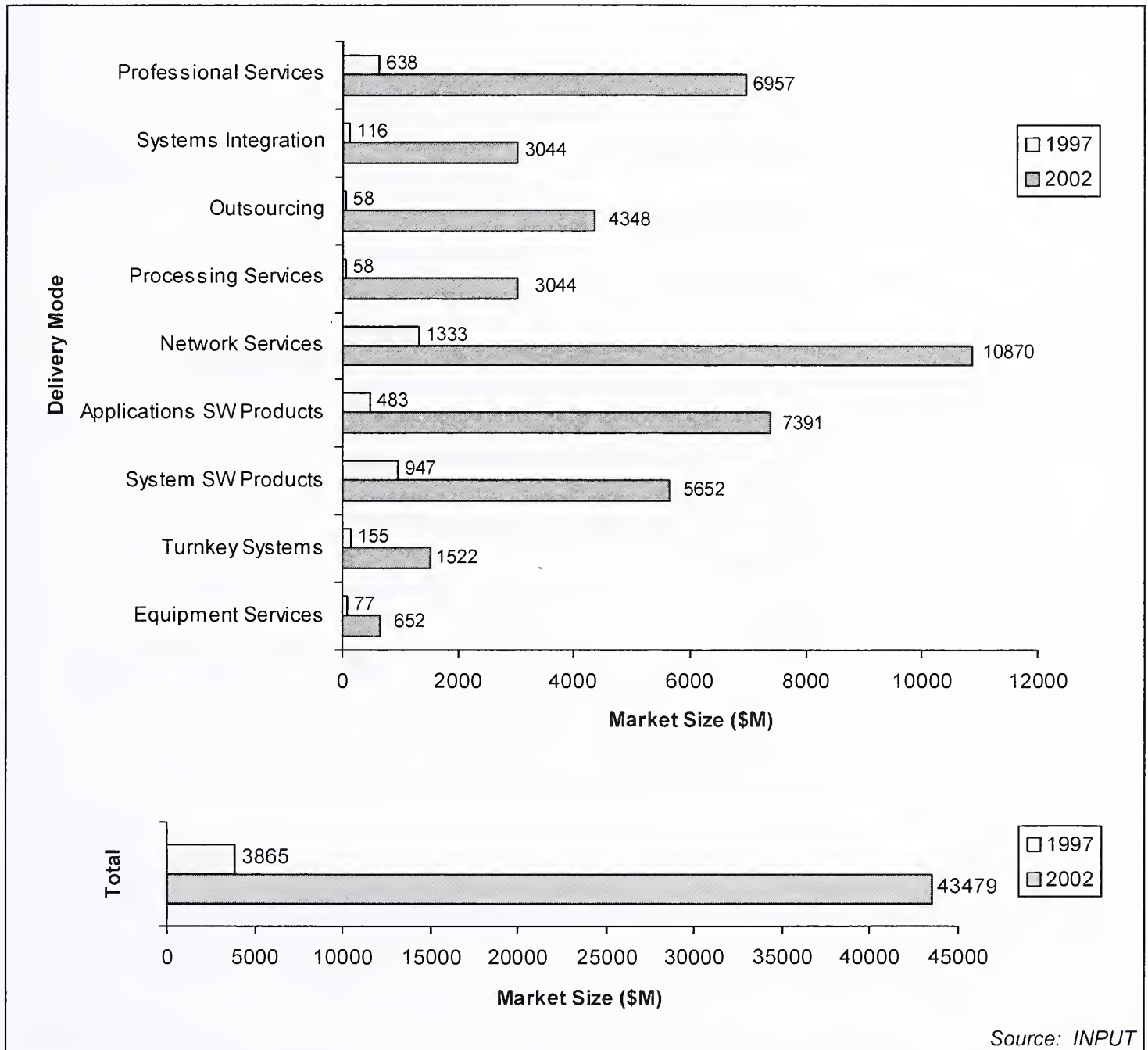
Internet/Intranet Market by Delivery Mode, 1997-2002: Hong Kong



4. Japan

Exhibit VII-24

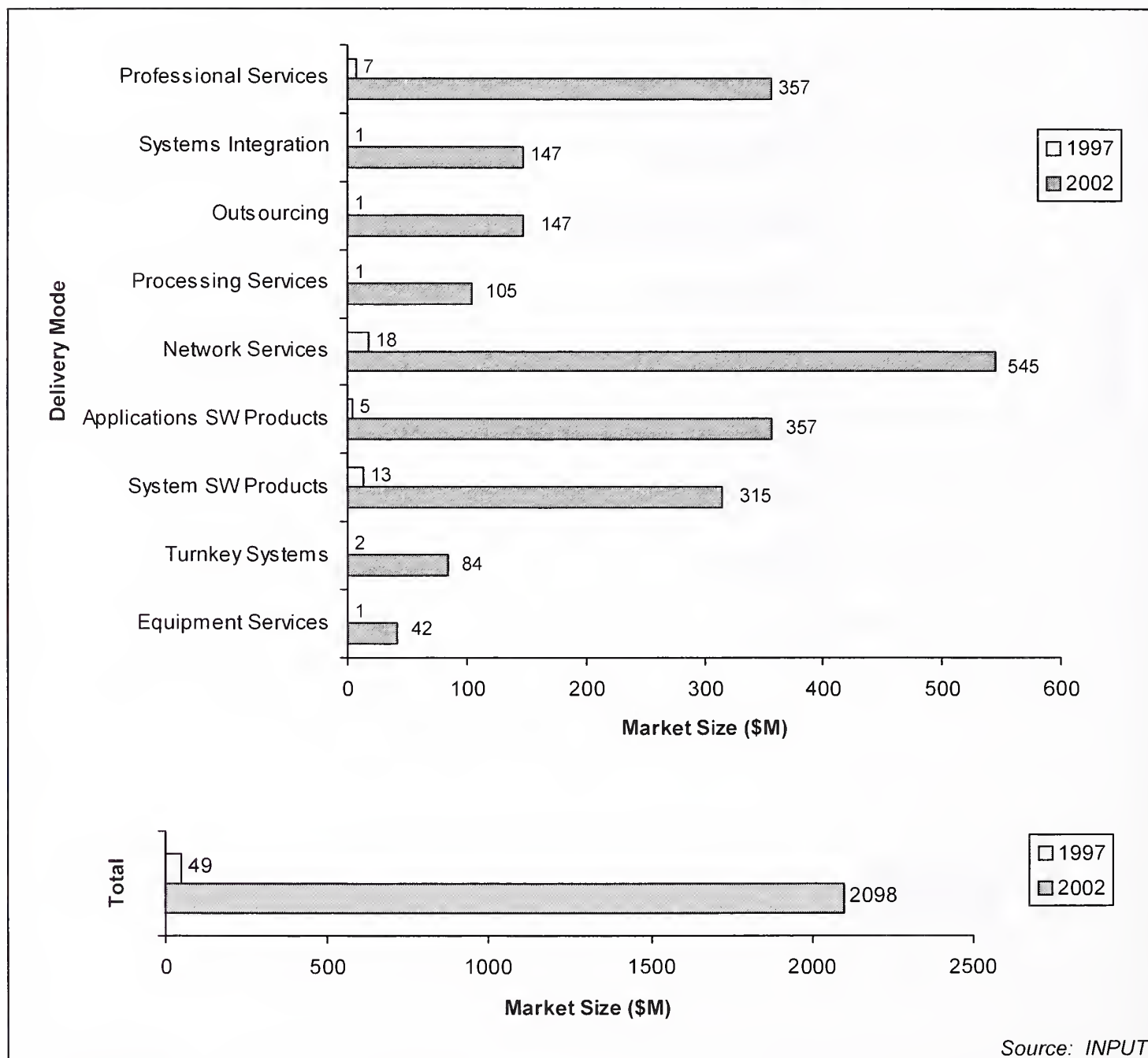
Internet/Intranet Market by Delivery Mode, 1997-2002: Japan



5. India

Exhibit VII-25

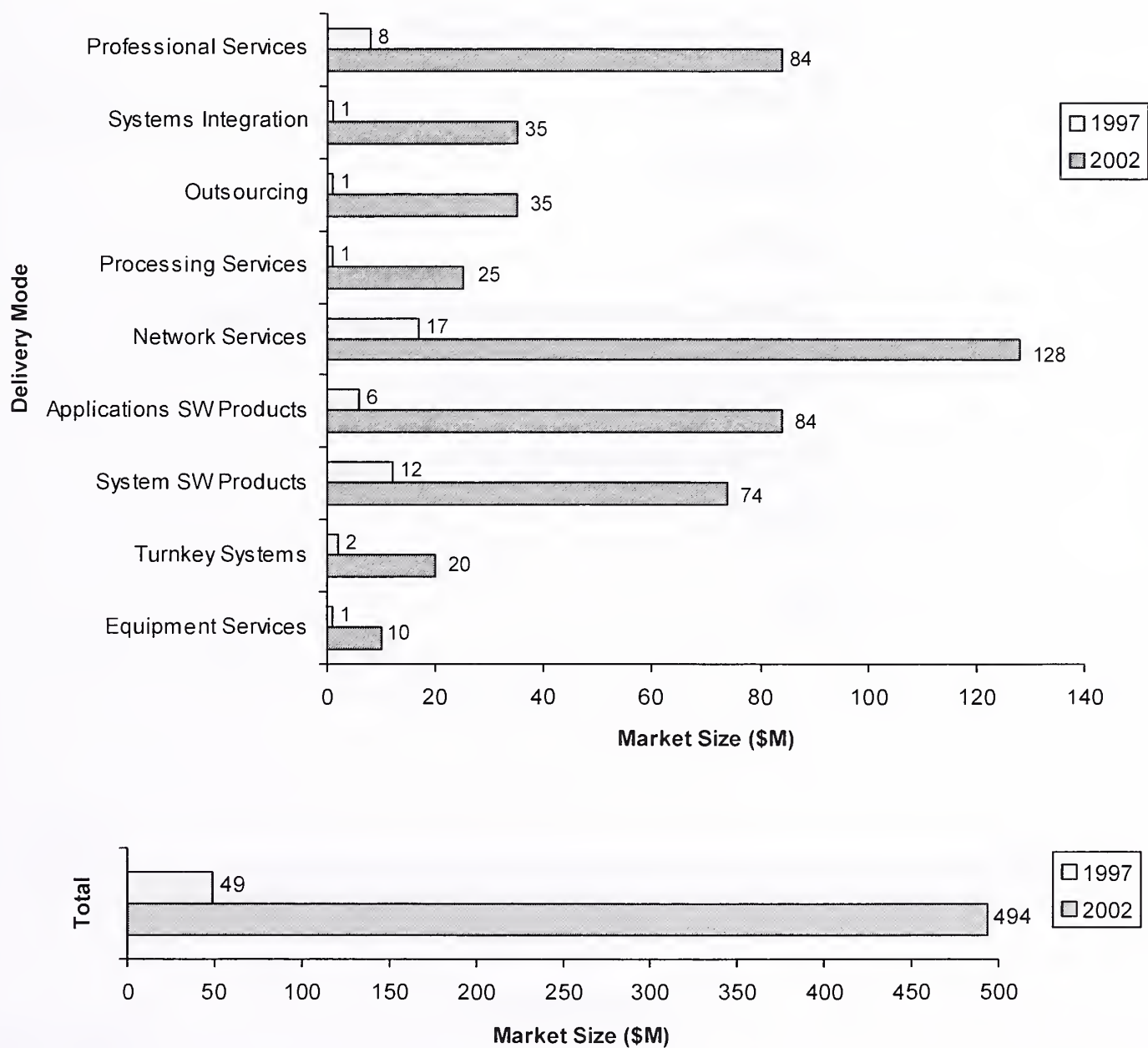
Internet/Intranet Market by Delivery Mode, 1997-2002: India



6. New Zealand

Exhibit VII-26

Internet/Intranet Market by Delivery Mode, 1997-2002: New Zealand

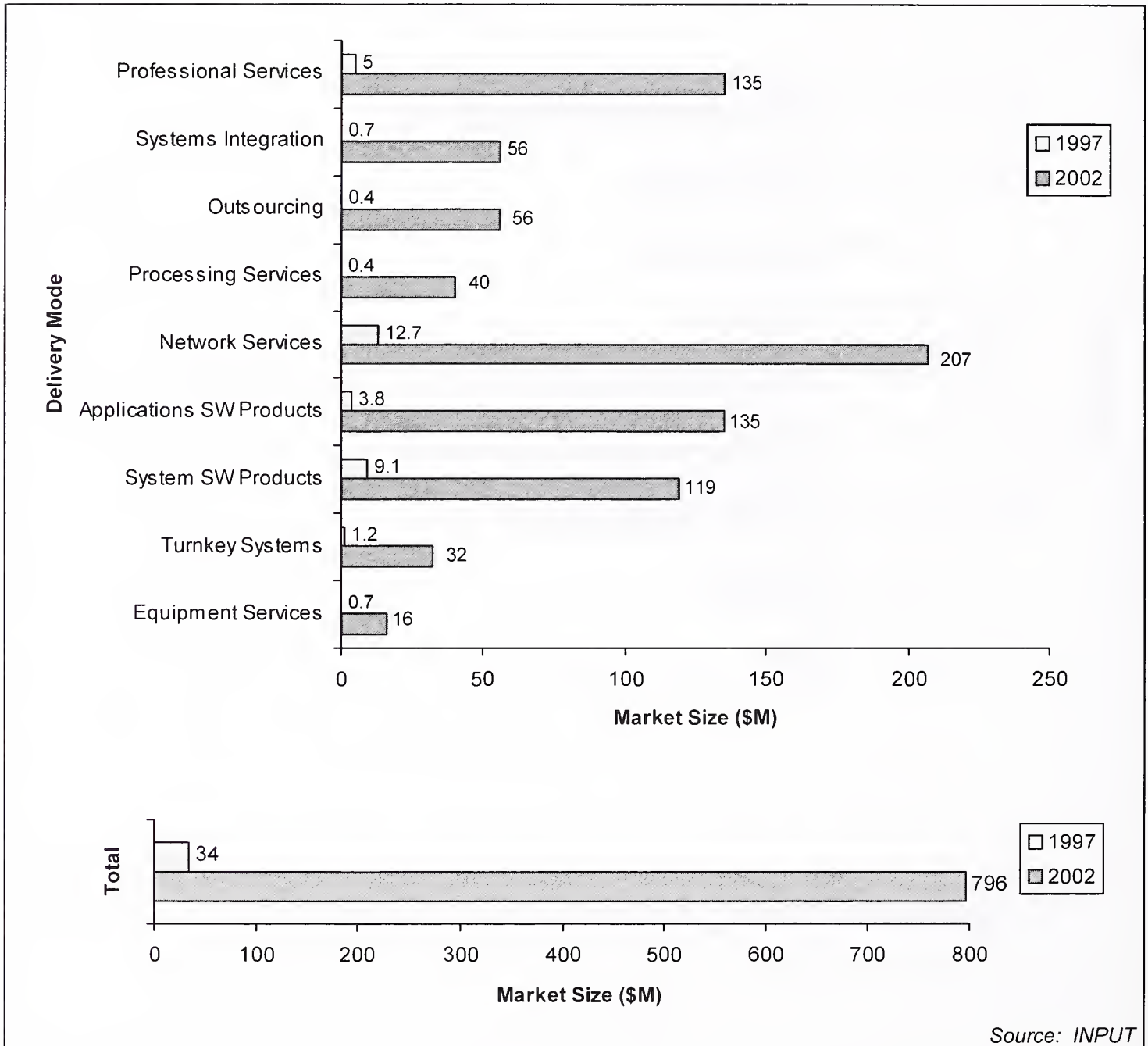


Source: INPUT

7. Singapore

Exhibit VII-27

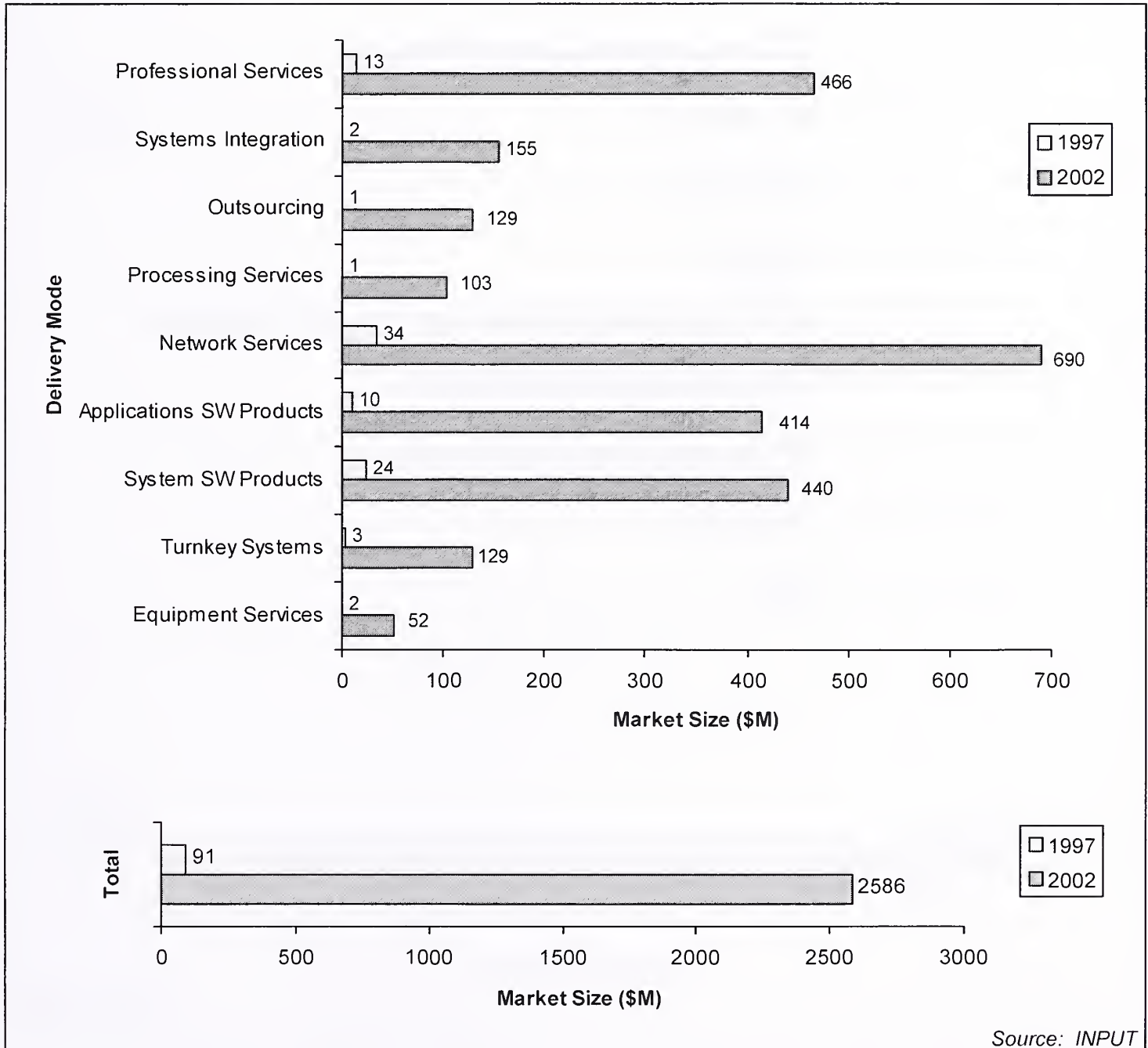
Internet/Intranet Market by Delivery Mode, 1997-2002: Singapore



8. South Korea

Exhibit VII-28

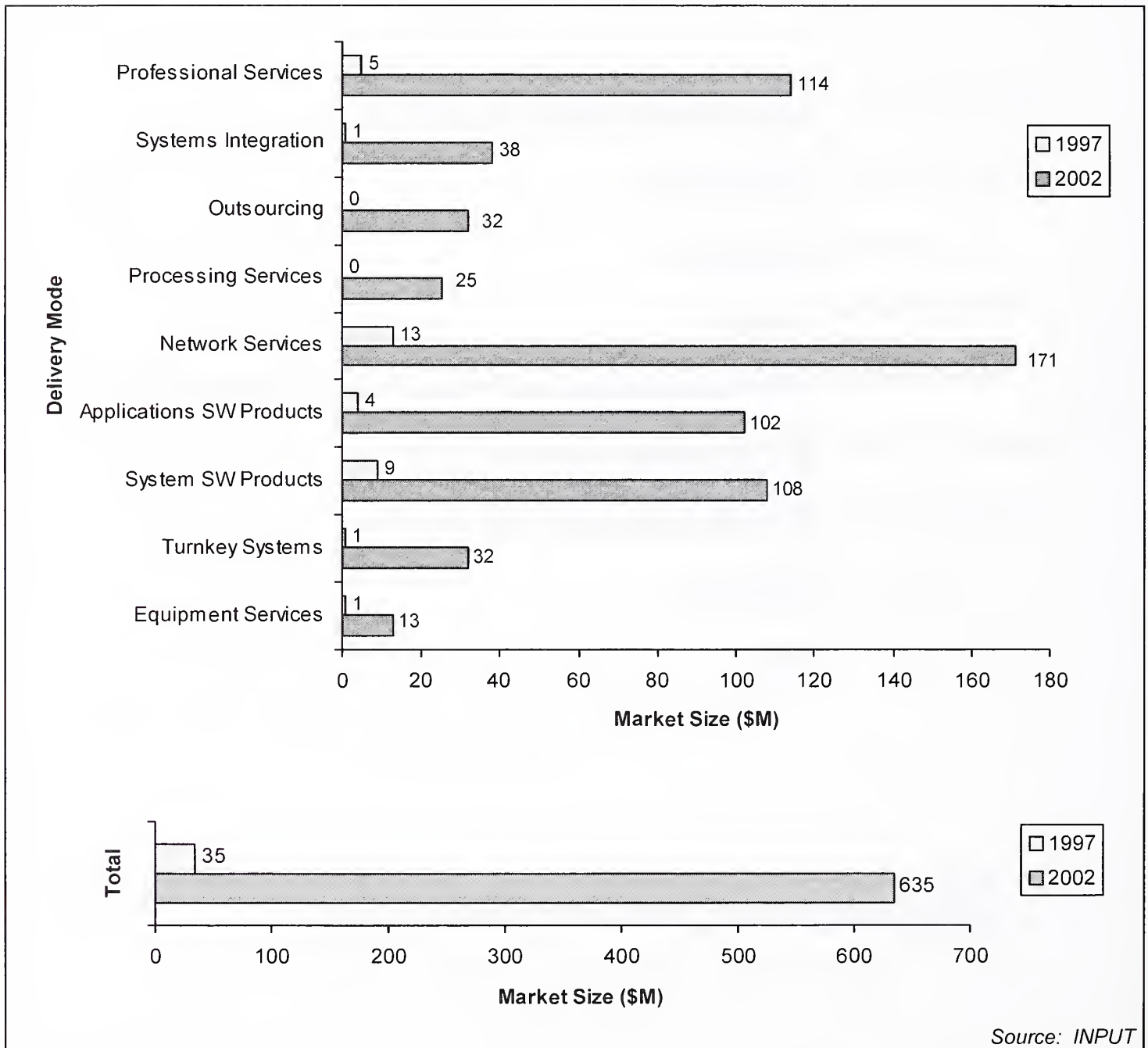
Internet/Intranet Market by Delivery Mode, 1997-2002: South Korea



9. Taiwan

Exhibit VII-29

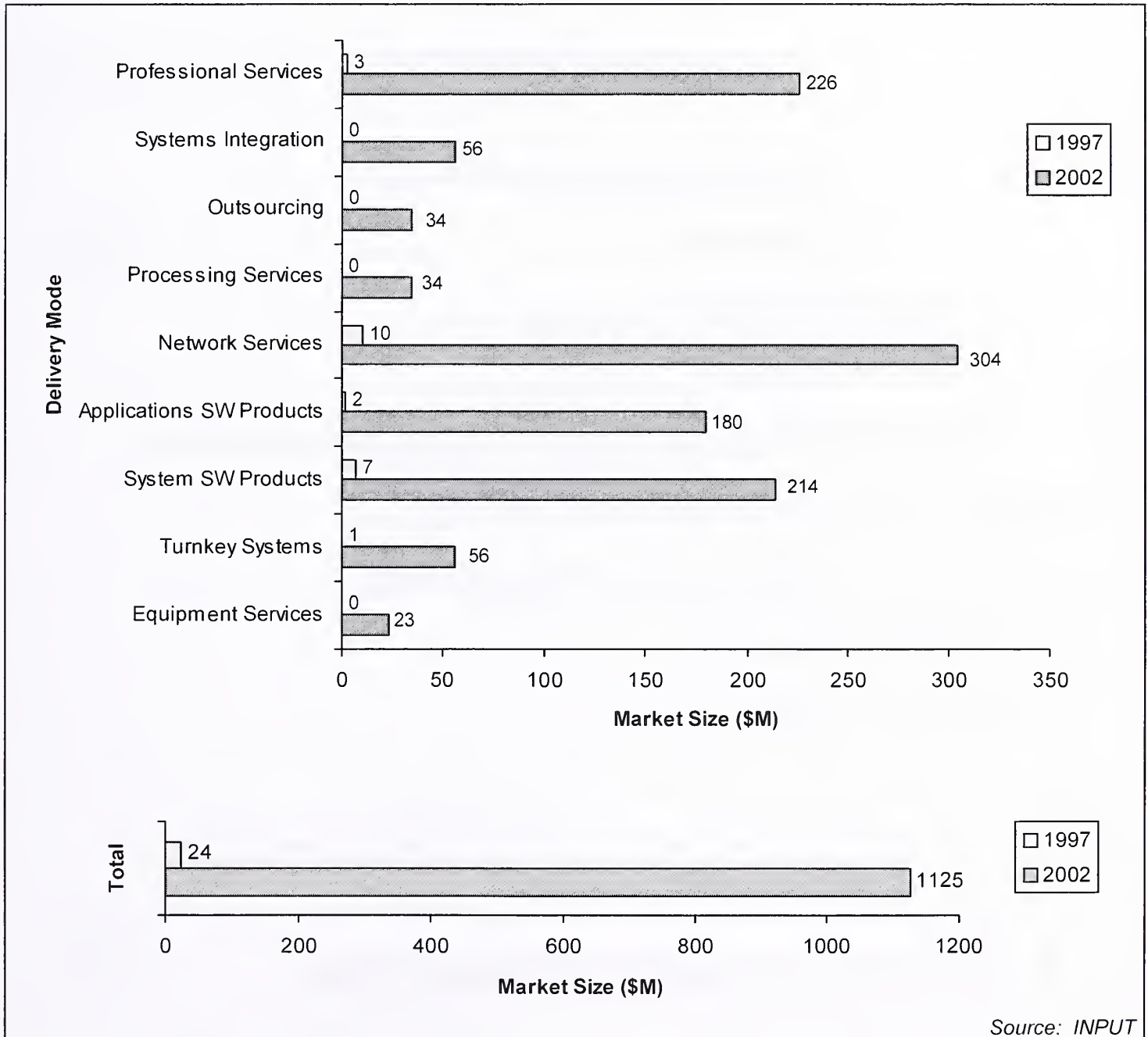
Internet/Intranet Market by Delivery Mode, 1997-2002: Taiwan



10. Other Asia Pacific

Exhibit VII-30

Internet/Intranet Market by Delivery Mode, 1997-2002: Other Asia Pacific



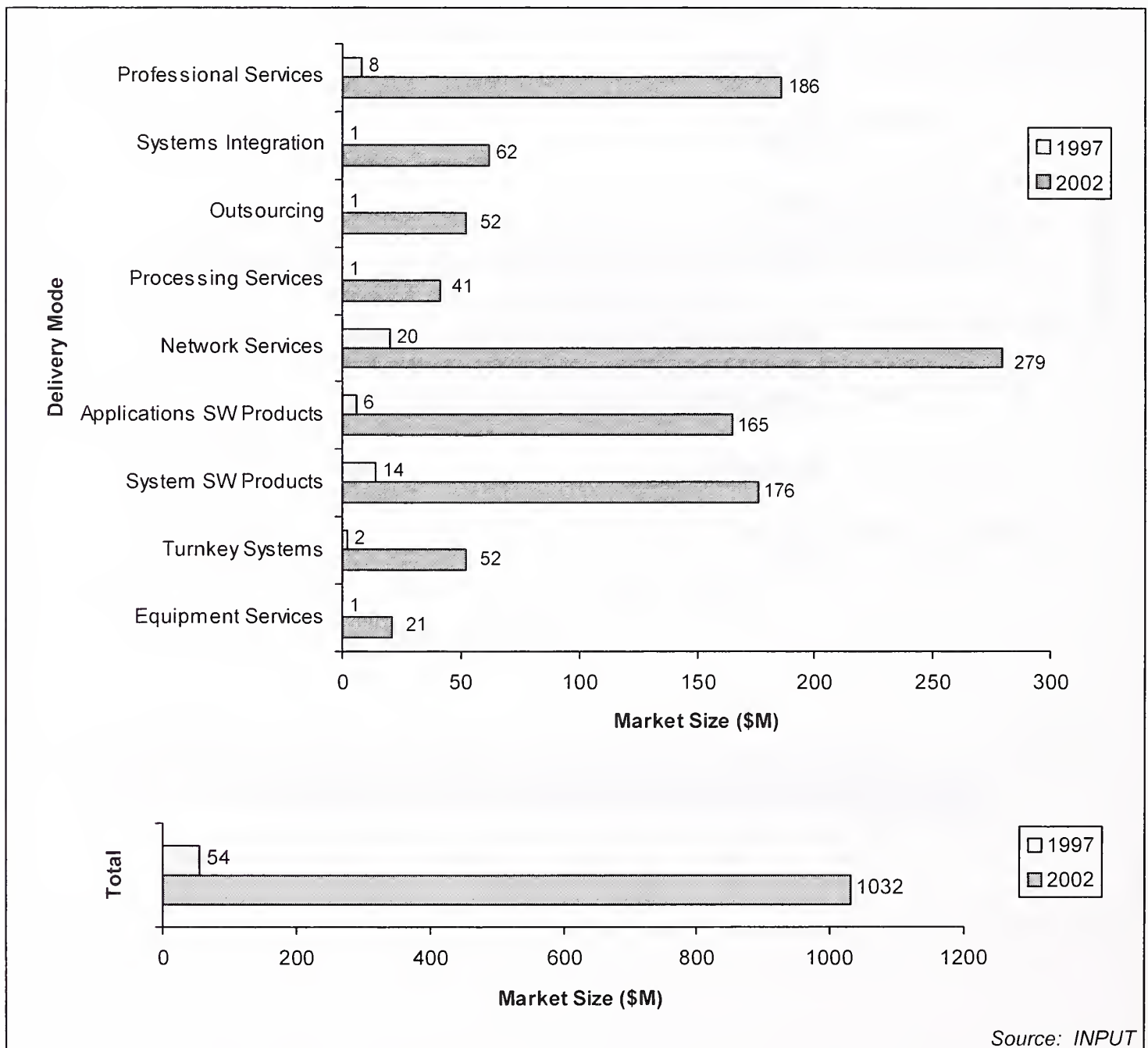
D

Latin America

1. Argentina

Exhibit VII-31

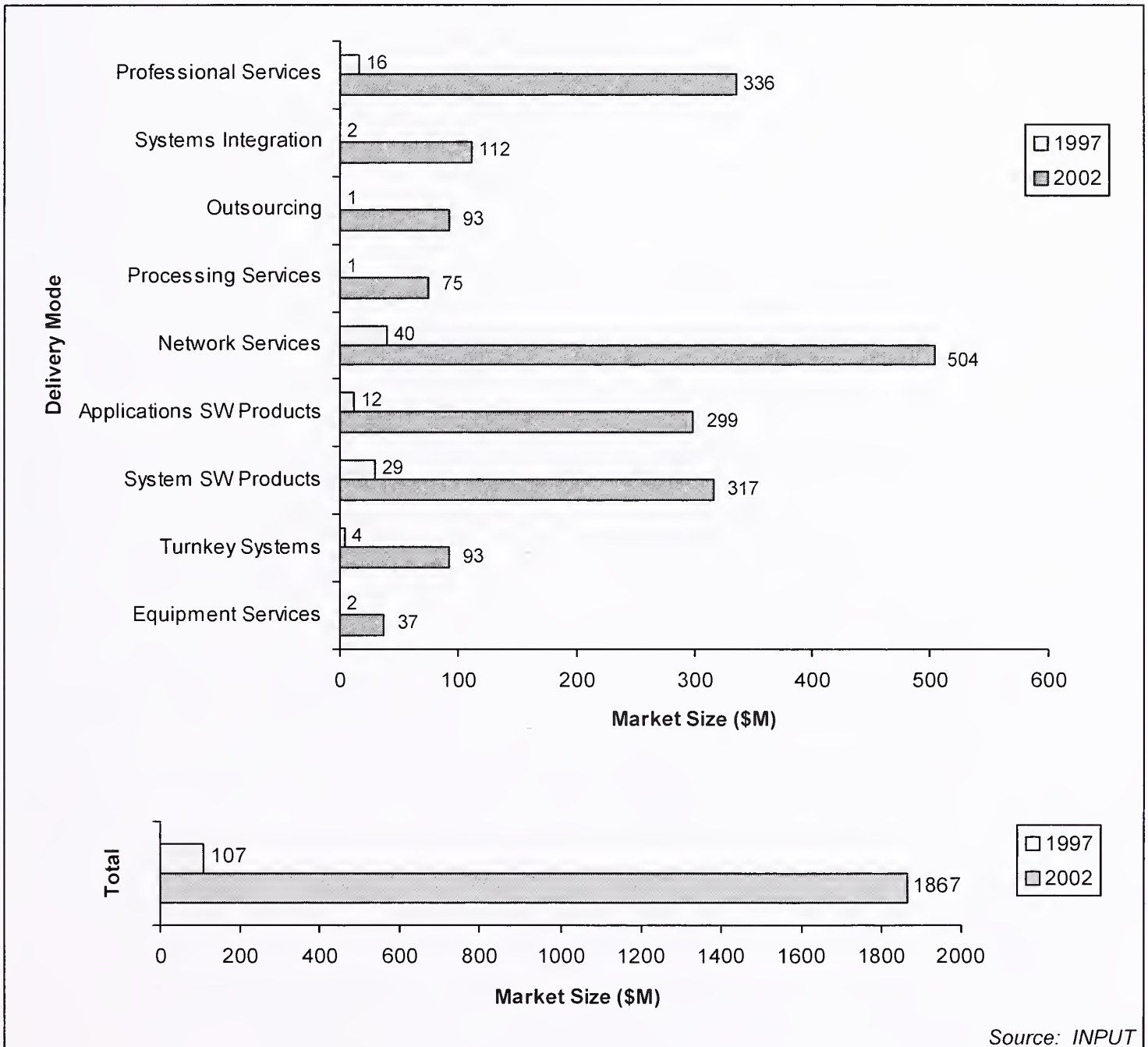
Internet/Intranet Market by Delivery Mode, 1997-2002: Argentina



2. Brazil

Exhibit VII-32

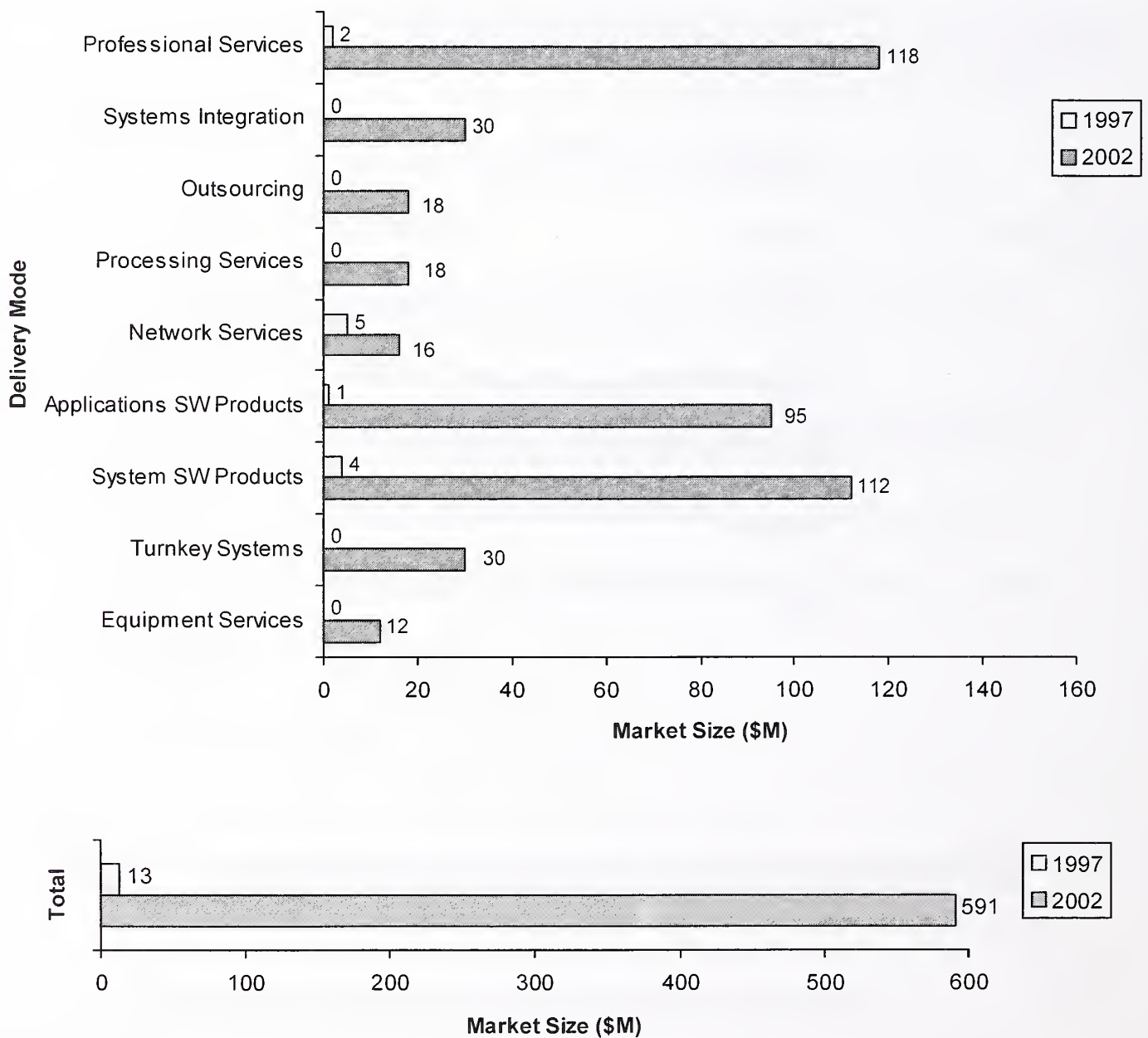
Internet/Intranet Market by Delivery Mode, 1997-2002: Brazil



3. Other Latin America

Exhibit VII-33

Internet/Intranet Market by Delivery Mode, 1997-2002: Other Latin America



Source: INPUT

